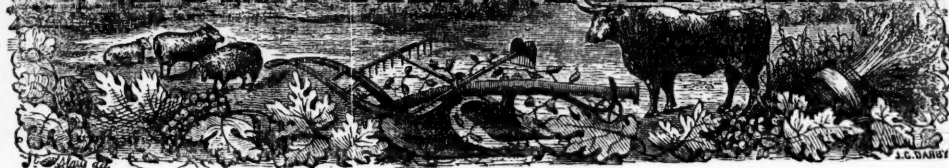


MICHIGAN FARMER



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R. F. JOHNSTONE, Editor.

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The attention of Breeders of Stock, Nursery men, Florists, Seedsmen and Agricultural Implement Manufacturers, as well as those who wish either to buy or dispose of farms or farming lands, stocks, &c., is particularly called to the advantages which a circulation of nearly twelve thousand offers to them throughout the State of Michigan.

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On Sowing Wheat and the Growth of the young Plant.

The wheat crop is of so much importance, that every operation connected with its cultivation is full of interest to the farmer, and particularly to the farmers of Michigan, who depend so much on that particular crop for their profits. In the cultivation of this crop, the preparation of the land is the first consideration, laying the foundation for the harvest that is to follow. This preparation consists with us in having broken up an old sod and letting it lie in fallow, during the spring and summer, or in plowing up a clover sod, and tilling the soil thus turned up to fit it for the seed. On some stiff clays, it is considered advantageous to expose the newly turned up soil to the mellowing influence of the winter, and therefore the plowing is done in the fall; but this is not a general practice. If the fallow is plowed to a depth of seven or eight inches, and few plows as yet go below this, all other cultivation should not go below four or five inches. The sod whether it is an old pasture, or last year's clover, must be let alone, and neither gang plow nor cultivator should again bring it to the surface. But the soil which the plow has brought up should be thoroughly broken, all lumps, pieces of clay, clods, ought to be crushed by the use of the cultivator, the harrow and the roller, before the seed is put in the ground, and then the sowing should be done with the drill if possible. If not, then the harrow should go three times over the seed, dragging the field first crosswise as the plow has gone, then diagonally, and finally lengthwise. If the roller follows the harrowing, the seed ought all to vegetate, and the crop will under ordinary circumstances appear with great evenness.

The necessity of good clean seed is acknowledged on all sides, and many for the sake of making the wheat which they select for seed, cleaner and less liable to disease, steep the grain in solutions of some kind, such as brine made of common salt or of blue vitriol. This is thought to hinder rust, blight, and other diseases; but it is now considered that many of

the benefits accruing from the use of these solutions are due to the destruction of the germinating power of diseased and imperfect grains of wheat, the plants from which being weak and sickly, not only take up much ground that should have been covered with healthy vigorous plants, but also afford a favorable base upon which disease may settle, and from which it will spread with strength enough to affect the really healthy plants. About four years ago an experiment was made for the purpose of testing the efficacy of a steep of blue vitriol in comparison with sound seed. The trials were made on four different plots of ground.

No. 1, was sown with wheat, amongst which was much diseased or imperfect seed; this was not steeped, and the result was that whilst much of the seed germinated and grew, there was scarcely a perfect ear, and the straw was badly blighted as well as the heads.

No. 2, was sown with the same kind of seed, steeped in a strong solution of blue vitriol. Of the seed sown only a small number of the grains germinated, but the crop was free from blight.

No. 3, was sown with seed of which every grain was picked, and the result was that every grain germinated, and gave a crop of good clean straw and grain.

No. 4, was sown with seed picked like that of No. 3, and the seed was steeped as in No. 2. The result was the same as in No. 3,—a good full crop free from blight.

A like experiment instituted to determine the propriety of sowing wheat deep or shallow, gave the following results:

Seed sown $\frac{1}{2}$ inch deep came up in 11 days.			No. of plants 7-8ths.
do 1	do	do	12 do.
do 2	do	do	18 do.
do 3	do	do	20 do.
do 4	do	do	21 do.
do 5	do	do	22 do.
do 6	do	do	23 do.
			All.
			7-8ths.
			3-4ths.
			Half
			3-8ths.
			1-8th.

It will thus be noticed that wheat should be covered with good light friable earth to the depth of not less than one inch, and not over two; and to insure a full crop the seed should be perfect.

When the seed is once sown, the process of germination begins, the moisture in the soil is taken up, and the grain swells, and the embryo, which is the chit at that end where the grain was attached to the stem, bursts from the covering, and a lower part—a fig. 1 pretrudes a rootlet, and an upper part, c as a bud, which will develop into leaves in a short time. After the radicle a, has burst through the covering, lateral rootlets are developed. These are not the true roots, they are on'y the sheaths through which the true roots protrude; in the same manner as the stem is the sheath from which the leaves and seed stalks are pushed forward. These roots again elongate themselves to a greater or less length without branching when slight projections manifest them-

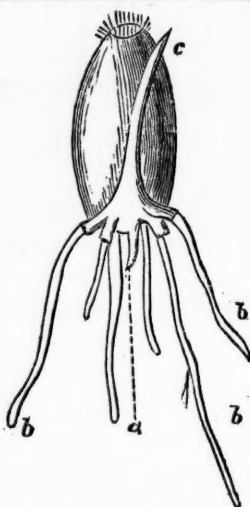


Fig. 1. Germinating wheat. a, Radicle, or first downward sprout. b, b, Rootlets, issued from the radicles. c, The plumule.

selves through which shoot branches, which are called fibres, b, in fig. 2 and these again give birth to new branches, which are named fibrils, c in fig. 2. If the seed is sown too deep, this root development is delayed, for whilst roots are thrown out sufficient to aid in carrying the plant to the surface, new roots are formed at each joint which may be under the

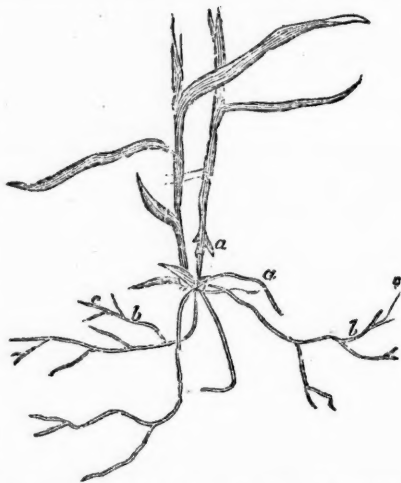


Fig. 2. Showing the wheat plant in its second stage of growth, with one stem tillered out. a a, the rootlets, originating at the joints. b, b, The fibres. c, c, The fibrils.

surface, and, the lower ones decay away. Thus deep sowing not only delays the appearance of the crop, but it cuts off a proportion of the seed from germination; and it also delays another very important process, namely the tillering of the plants.

When the young wheat plant has a healthy growth, it may be noticed that from each of its first leaves a bud will be developed, for the nourishment of which new roots will start; and even from the

first leaves of these secondary buds, again new buds will arise, for the nourishment of which a new series of rootlets, fibres and fibrils will be developed, whilst the older rootlets are spreading and branching for the nourishment of the primitive buds, at a still greater distance from the centre of growth. To perfect this tillering process, time is required, hence a long cold spring is beneficial. Where wheat is sown early, and it comes up quickly, and rapidly, but does not cover the ground well, appearing as if sown very thin, the growth has been too rapid to permit it to tiller, and the cure adopted in this case is to feed it down with sheep early enough in the fall, to give it time to recuperate before winter sets in; or so as to

prevent its too rapid maturity when the spring starts it to grow, and thus give the young buds which spring from the axils of the first leaves time to start into life. The tillering action of the plant will continue for along period, if the development of the central stem is delayed; but as soon as it is elongated enough to commence the development of the head, the tillering ceases, and the tillered stems of the whole stool produce ears of grain which ripen about the same time as those growing directly from the first seed bud. As the tillering depends much on the condition of the surface soil,

which if rich, friable, and capable of giving generous support to the plant, and of developing it rapidly, will cause a great luxuriance in the stools, each of which may thus average from six to ten good heads throughout a field; it will easily be understood how this will affect the crop, if instead of from six to ten heads in each stool, the average is only from three to five.

The property of tillering belongs to all grasses in a greater or less degree; but in the wheat it is one of the elements of its value, which is much neglected, and seldom receives that stimulus which a thorough preparation of the surface would afford; and which is insisted upon by all who are aware of the qualities of the wheat plant.

It is this property which has secured in many places the abundant crop of wheat which has just been harvested in this state, and which was in a great measure promoted by the cool and wet spring. Many barren spots which it was supposed even as late as the first of May, would produce nothing, having been completely bared by the frosts of the winter, have yielded well, the wheat tillering out very freely under the exposure to light and air which was afforded by the destruction of the adjacent plants.

It appears therefore, that if we would secure a full harvest next season, that we should—

1. Have the soil in good order both above and below, by depth of plowing and by thorough surface tillage.

2. That the seed selected should consist of perfect grains.

3. That the seed should not be sown to less depth than one inch, nor to a greater depth than two inches, and that to secure this evenness of covering, it is necessary to use the drill.

Another Chapter on Horses.

"What variety of horses shall we breed for profit?" asks a farmer in one of the western counties; "I find one class of men who will be satisfied with nothing less than the admission that a horse to be perfect must be a Morgan or Black Hawk, and they won't admit there is any merit or profit in any other race or family. It is no use to dispute with them; for they have got the Morgan or Black Hawk fever; and if you only bring before them a little scrub of a Shetland pony and christen it Morgan, these men are ready to drop on their knees to it or go off into ecstasies like Indian Fakeers on his points, his style, his carriage, and his likeness to the "Old Horse," or to "Old Sherman" or "Old Gifford" or "Old Woodbury." And there is always present on these occasions some old Green Mount in "boy" who has on hand a stock of reminiscences of some of these noted horses, and whose authority on likeness is so complete, that it would be in vain for an inexperienced man like myself to say that I thought them talking a heap of stuff. On the other hand, Mr. Editor, there are a class of men, who are terribly sanguineous, in all they say; every other word is "blood," whenever they see a horse with long legs, a body like a greyhound, a back that would carry a party of four, and a neck like that of a merino ewe, they are like the giant in the story book, ready to cry out "Fee fo fum, I smell the blood of an English thoroughbred," and off they go in their turn into ecstasies over some old screw that never was worth anything except his pedigree, on or off the course. These men are down on Black Hawk stock, and Morgan is as much an abomination to them as to a Free Mason. When you call up to their notice the splendid performances of Lancet, Ethan Allen, Lady Sutton, or Black Hawk Maid, they immediately ask what are they to those of Flora Temple, Lady Suffolk, Jackson, Moscow, Mack, or the Messenger stock, or what would the Black Hawks be were they not quartered and crossed with "blood"? Whenever I stop to talk horse my head is either filled with "blood," till everything looks "ganted up," or else I have the old chieftain of Sacs and Foxes shaking his fist in my face, or rattling his old bones in my ears, till I would as lief be stationed in a tamarack swamp listening to the chorus of sixteen hands high bull frogs. Now I have three mares, and all likely animals. I

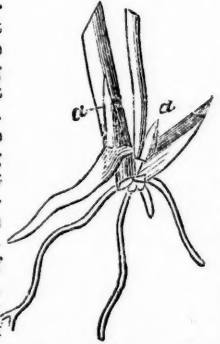


Fig. 3. a, a, buds starting from the axils of the root leaves, and which are forming rootlets.

do not know that any of them would draw a prize at the state fair for speed, but they are tip top at the plow, and will draw as heavy a load as I choose to pile on. They have stout limbs, good action before a light wagon, will trot ten miles within an hour, if not too hard worked the day before, are not quite sixteen hands high, the smallest one being about 15 $\frac{1}{2}$, and will weigh from 900 to 1000 pounds. I want to raise some colts from them. Will you or any of your readers tell me what would be the right kind of horse to use, with the design in view of raising three colts, which at the end of three, four or five years, taking all the chances of accidents, health and breaking into calculation, would net me the most money. I do not want them for my own use, but I want to raise them as I do other stock on my farm, to put them into market and obtain the largest price I can, just as I do for my young cattle, or sheep."

Yours,

JOHN CHEVAL.

We sincerely hope that some of our readers will send us a solution to the problem which our correspondent has propounded. In raising horses for market, there are a number of questions to be taken into consideration, at the same time there is one principle which seems to govern in the sale of horses. That principle is, that if the horses are of pleasing color, those which possess large size combined with action and style, invariably excite the most admiration, and seem to be considered worth the most money. For instance a stranger brings into the city of Detroit a matched pair of horses, over sixteen hands high, which will trot their mile in three minutes and a half, and possessing style and carriage that will render them valuable carriage horses, he will be told that if they are well broken they are worth from \$800 \$1000. Another stranger brings in at the same time a pair of equally well matched horses, not over fifteen hands high, and also able to trot their mile in three minutes and a half in double harness. They, likewise, are handsome, of good style, and well broken. He will be told they are not worth over \$500. Now what makes the difference here. Is it not the size, and is it not because horses of sixteen hands high, with good style and free action, are far from being as plenty as the other kind last named? In these remarks we do not intend to depreciate the merits of the smaller sized animals, or to assume that colts under sixteen hands may not be raised, which individually will not be worth a great deal more; but they have to prove that by their own merits; while if they turn up to be nothing but a common roadster for time, they may not sell at four years old, for over \$150, although they possessed a pedigree on the side of the sire long enough to reach from Boston to the tomb of the Prophet at Medina the holy, while the sixteen hands colt, although, not possessed of speed, if well match-

ed might still bring a large price as a carriage horse, or even as a valuable cart horse. These notions we commend to John Cheval, as being the principles by which he should be governed. He should seek a stallion, of good size, not less than 1200lbs., which if not entirely thoroughbred, yet possesses a good amount of racing blood, and which will infuse his own action into his progeny. According to the general principles of breeding, the outward form, general appearance, and organs of locomotion are chiefly determined by the male; the vital organs, size, vigor, constitution and endurance come from the female. In proof of this it is cited that the mule is the produce of the male ass and of the mare; whilst the hinny is from the horse and the jenny. The hybrids are very different, though coming from the same set of animals; the mule having the distinctive external features of the ass, whilst the hinny has those of the horse. The first is a modified ass; the second is that of a modified horse. This law has been observed to prevail not only in the crosses above mentioned, but also in cases where dogs and foxes have been crossed, in hybrids from varieties of birds, and even in the artificial crossing of fishes. Of course it predominates, with certain modifications in the breeding of domestic animals, and a knowledge of it may help John Cheval out of his difficulties.

Spring Wheat and Fall Plowing.

Wm. O. Houghtaling of Grand Rapids writes that he has two lots of spring wheat, grown under different systems of cultivation. The first was a very fine lot almost ready for the sickle on the fourth of August, and which was so rank and luxuriant, that the yield seemed equal to that of the best field of winter grain. The field was plowed deeply last fall, and only cultivated the last spring previous to sowing the seed. The seed was sown on the 20th of April, and cultivated in with a light cultivator. The second lot was plowed during the spring immediately before sowing the seed; the soil being equally as good as that of the first. Both were old sod. Yet the yield on the second lot, either of grain or straw, does not seem to be half as good as that sown on the land plowed last fall. It is the opinion of Mr. Houghtaling that spring wheat grown upon fall plowed land, as he has tried, yields a better and surer crop than winter wheat sown in October. We have no doubt at all of the correctness of the practice of fall plowing for spring crops, and especially for spring wheat and barley. The exposure to atmospheric influences during the winter, mellow and enriches the seed bed to such a degree, that whenever the grain is sown it has the elements at hand ready for assimilation which it needs.

The soil newly turned up, has first to be prepared or mellowed, or oxidized as the chemists would term it before it becomes fit to yield nourishment; and

while this process is going on, much precious time is lost, and the growth of the plant is abbreviated in proportion; its time for tillering cut short, and the yield cannot be as large, as when it has the whole length of the season which nature seems to have set apart as that in which the plant shall make stems and leaves, previous to the formation of the seed vessels.

Oakland Farms and Stock.

Near Mr. Brook's farm is that of J. D. Yerkes, and also that of his father. In the last number of the *Farmer*, we noticed that Mr. Yerkes had sent a heifer down to Ohio to the celebrated New Years Day. Here we found the Shorthorn bull Guelph, which was formerly owned by S. W. Dexter of Dexter. He was looking as well as usual. Mr. Yerkes had a very simple method of dealing with breachy cows. One of his neighbors complained that he had an old cow, which nothing would hinder from getting into the corn. She had the faculty of throwing down bars and rails, in any quantity. Mr. Yerkes offered to buy her, and was immediately taken up. As soon as she was driven home, a piece of stout wire was put through the skin of the face of the cow just above the nose, somewhat in the same manner as a ring is put in the nose of a pig, only instead of being put through the cartilage of the nose, it was placed on the skin about two inches above the nostrils. This simple contrivance effectually prevented the cow from using her head to push down rails or getting between bars, and she had not broken out of the lot in which she had been placed, although the fences were none of the best.

Close to Farmington is the farm of F. E. Eldred and Geo. Gregory. It is finely located with a stream running through one side of it, and it is well watered on every lot. Mr. Gregory has commenced a series of improvements, with the intention of turning this farm to the purpose of breeding and raising horses. On this farm Mr. Eldred has already a number of mares, well bred, and capable of raising some fine stock. Here we found also Wild Dayrell, a colt of Kenble Jackson, the celebrated trotting son of Andrew Jackson. This colt is now but three years old, yet he stands full sixteen hands high, with a fine blood-like head, very pointed towards the nose; his color is a dark bay approaching to brown, with white feet. He has the Jackson hind legs, of great length and twisted from hip to gambrel; his fore feet are slightly turned outwards. He promises to become a large and valuable horse, with but one drawback, and that is his eyes, which have been injured by the growth of wolf teeth, which were allowed to grow until they created a bad inflammation. Otherwise this colt is healthy, and gives promise of becoming a fast trotter. On the same farm is Island Jackson, a colt from Jackson, out of Sweetbriar by Bellfoun-

der, he is now two years old, of good size, and remarkably fine action. He is matched against a colt from Abdallah Chief when three years old of the same age, now owned by E. N. Wilcox. Young Poscora, one of the best colts in the state, is also on this farm; he is out of B. J. Finley's Poscora, a trotter of remarkable speed and quality formerly owned at Saratoga; his dam is a brown mare called Lady Jane, now on the farm. She is a beautiful mare, and shows her breeding at every point. She was sired by imported Sir Robert, and her dam was sired by Young Eclipse, grandsire Long's Eclipse, g. g. sire American Eclipse. Poscora was by Sir Walter, he by Hickory, g. sire, imported Whip, g. g. sire, English Eclipse out of Nettletop by Diomed. Independence is a yearling filly, foaled the 4th of July 1856, out of imported Liza, by Jackson. Miller's Damsel 2d is a filly sired by Jackson, out of a Hambletonian mare owned by John Thomas. This filly is a most beautiful yearling, of large size and is said to resemble in color and general appearance, the Long Island mare of the same name. Mr. Eldred has a number of well bred younger colts, which promise well. He is doing his share towards improving the stock of horses, and in giving the region around Farmington a reputation for raising excellent horses.

Hambletonian, of which we will give a plate with the next number, has become a favorite stock horse. His colts are large, have a stylish carriage, and are generally fast travellers. Mr. Eldred drives a pair of his colts which are admirable roadsters. He possesses a great deal of Messenger blood, and whenever he has had a colt from a blood mare, he seems to give speed, style and size. It is probable he will be shown at the state fair, with a large number of colts from five years old down to those foaled the present spring.

Mr. S. D. Brown who lives south of the village of Farmington, and whom we found busy in his shop repairing a thrashing machine for some of his neighbors, against a time of need, has a fine stock of mares and colts. His horse, which he esteems very highly, which is of Black Hawk blood, being sired by the Myrick horse, has certainly raised him some fine colts, which show both action and style in a superior degree. He was not at home when we called at Mr. Brown's house, so that we cannot speak of him from actual observation. It is difficult to tell much about how young sucking colts will turn out, but there are some general points in build and form, which evince capacities for speed, and endurance, about which there can be no mistake. Mr. Brown is a very warm friend of the *Farmer*, and acts as its agent very efficiently in his neighborhood. He suggests that the State Society, should provide stalls for the horses to be shown at the State Fair, to be built on the grounds.

Mr. C. W. Green, a well known agriculturist, and a prominent and active member of the Executive

Committed of the State Society, we found busy taking advantage of the fine weather in his cornfield. He has been erecting a dwelling house, and is busy concentrating his forces on the improvement of a farm somewhat out of order when he came into possession. On his farm we found a yoke of the best matched and best oxen in the state. They have taken the first premium whenever shown at state or county fairs. They are of large size, very muscular, very even in power and weight, remarkably well broken, and are always kept in good order. Mr. Green is not a breeder of Shorthorns for breeding purposes, but he has taken care to have infused into the stock kept for farm purposes, a good deal of Shorthorn blood, and the consequences are that he has grades which possess first rate qualities either as milk cows or fattening stock. His hogs are of the large breed, well mixed with Leicester blood in them.

Mr. Green has paid much attention to the breeding of horses. He owns a thorough bred stallion which he brought some years ago from Ohio. He is now supposed to be nearly twenty years of age, but yet possesses in a remarkable degree all the vigor and action, of a four or five years old colt. He has a fine well shaped and small head, well set on, a barrel shaped body handsomely supported by well proportioned limbs, both before and behind. His color is a dark bay. His colts are distinguished for size and carriage. A four year old named Young Farmingtonian, sired by Sir Archy, and whose dam was a large bay mare, a grand daughter of American Eclipse, shows size, carriage, action, courage and good temper, while his form is very perfect, without being leggy. He also is a dark bay. His dam is a mare of great size and qualities for breeding purposes. She is now seventeen years old, and has had fifteen colts. Several of them which were pointed out, were distinguished for their fine size, and just proportions. This mare was brought into the state when quite young, by Mr. Green, and with the exception of one other mare, we believe she is the closest bred animal to Old Messenger there is in Michigan.

The Spanish Merino sheep are favorites in the neighborhood of Farmington, and amongst those who had fine flocks we noticed that of T. W. Barber. He had a clip of 120 fleeces, which weighed 689½ pounds and which was sold at 49 cents.

The crops around Farmington had a very luxuriant appearance. The corn was somewhat late, but the oats and barley were excellent, as well as the wheat, and amongst them none seemed to promise more than Mr. Walker's fields. He is improving a large farm located on the plank road.

Mr. Rogers, the melancholy fate of whose son has excited so deep a sympathy throughout the community, has a fine stock of cattle, descended from the Old Splendor stock. One cow was remarkable for

her square form, and fattening properties. She did not show good milking points however.

In company with Mr. C. W. Green, we visited the farm of Joshua Simmons, Esq., who has also commenced improving his stock. At the sale of the stock of Messrs. Sacket, Barber & Co, last fall, Mr. Simmons purchased a cow in calf to Bletsoe. This cow gave birth to a bull calf which promises to be a remarkably fine animal, we believe it is now about six months old, and is red and white in color, with a broad loin, and a square body, rather short in the leg and fine boned. His skin was very mellow. Mr. Simmons had taken some pains with this calf, and he was broken and obeyed the wave of a switch as perfectly as a well trained steer, standing still at a word, and turning to the right or the left, whenever desired. He was a remarkable specimen of the effect of a little care in bringing up such animals. Bletsoe the sire of this calf was imported from England, and was sired by Diamond 5918 of the English Herdbook. On the side of the dam he runs back through his dam Fatima to the 3d Duke of Northumberland, Sir Thomas, Sir Alexander, Marske, North Star, Wellington and the celebrated Favorite.

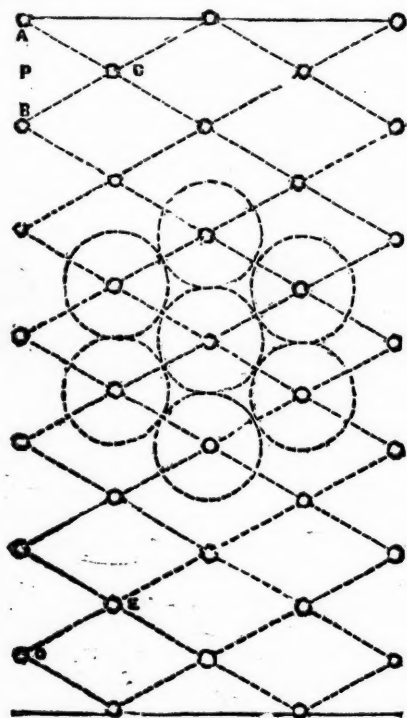
Extensive Orchard Culture.

A visit during the past month to the farm of H. H. Emmons, Esq., on the banks of the Detroit River, where the Ecorse, debouches into it, was rewarded by noting the extensive operations which he has undertaken to improve a somewhat run-out piece of land.

This is his first year, and as a matter of course, every thing is in the rough as yet. But nevertheless, Mr. E. has succeeded in carrying on his main design of laying the foundation of a fruit farm. He has planted already 30 acres of apple trees of the best varieties. These thirty acres contain 1500 trees, and in riding over them, about the 6th of August, we found only two or three trees dead out of the whole number. The ground appropriated to orchard purposes is somewhat level, but with slope enough to carry off the water, if furrows or drains are only kept open. The soil is a clayey loam, and the field is an old sod which has been cut off and fed off till it now grows but a very indifferent amount of poor pasture. In planting the trees, the sod was pared off the top, and the tree set on the surface, with the sods piled up over the roots. This it was considered was better than planting them in holes, and allowing the earth to bake and harden over them. The sods acted as a mulch, and the trees themselves were kept out of water; and with the spring which we have had, the plan has succeeded admirably.

The trees are set in quincunx, and at distances of thirty-five feet apart every way. This affords an excellent chance for their cultivation, and also for using the ground to the best advantage. Mr. E. at present is desirous of breaking up his orchard, that

he may get rid of the old worn out pasture, and also crop it to the best advantage, without injury to the trees.



The cut above given represents the form in which the trees stand, and it will be seen that there are three directions in which the land may be cultivated. But it will be noted that whilst the trees are 35 feet apart from each other, each of the lines on which the trees are set, are only 30.3 feet apart. This may be proved by the following rule: In the left hand upper corner of the cut will be found a triangle marked A. B. C. Each of its sides may be supposed to be 35 feet, the distance from tree to tree which Mr. Emmons has set them apart; but to find the distance from row to row, which it will be seen must be equal to the perpendicular, let fall from C to P, we multiply 35 by itself, or square it, and then multiply the product by 3, divide this product by 4, and extract the square root of the quotient, we shall have 30.3 feet as the distance from row to row, and this would be the width of the rows which are open to cultivation.

In cultivating the land in these rows, however, Mr. Emmons is desirous of not allowing it to interfere with or hinder the growth of his trees, and he proposes to plow between each row of trees a ridge of twenty feet in width, leaving five feet on each side of the trees, on which no crop shall be grown. The following cut represents a section of the land thus treated.

The narrow strips of land on which the trees stand will be plowed up at first with a narrow furrow of about five inches in depth and seven inches and a half in width, so that each may lie at an angle of 45 degrees. In the spring this will be cultivated only with a cultivator set to a width of nearly five feet, so that in going once up one side of the row and down the other, the whole of the land left for the trees may be tilled. This operation is to be performed as often as it seems to be needed, to keep down grass and weeds, and also to counteract the effects of drouth—probably twice in the spring and once in summer and once in the fall. It is calculated that this thorough cultivation of the top soil will have the effect of dispensing with the work of mulehng each tree, and also be the means of promoting their growth, while top dressings of salt, leached ashes, plaster or manure may be applied at any time when it is convenient. The growth of the trees is to be esteemed a sufficient crop and return for the use of land, and the expense of labor.

The twenty feet ridges between the rows of trees are to be plowed this fall to a depth of ten inches, with a deep water furrow on each side, which is to be finished in such a manner as to carry off all surface water. These twenty feet ridges will be manured and planted with potatoes next spring, and this crop may be followed the next season with oats and clover seed, or with oats alone, as Mr. Emmons may decide then to commence tile draining the whole orchard. It is calculated the tile drains will be put in to a depth of thirty inches and so as to run down in the centre of every other row as marked by the letter o in cut No. 2. If it should be found that this is not sufficient drainage, then the tiles will be put down in the centre of every row, and afterwards the whole orchard will be thrown into grass, when the trees are well established, and have come into bearing. These drains will connect with mains which will conduct the water to the Ecorse river. These mains will be made of sufficient size to carry off all the water from the branches whether these are 30 feet or 60 feet apart. But even then the fruit crop will be considered as able to pay for sufficient manuring and working to keep up the bearing qualities of the trees.

It will be seen that of the thirty acres thus planted with trees, ten acres are appropriated to the trees, and that twenty acres will be put in crops. It is therefore easy to estimate the outlay for the first three years, and the income to be realized exclusive of the increased value of the trees.

FIRST YEAR—No crop except grass cut from old pasture.

Interest and taxes on 30 acres of land at \$50 per acre.....	\$150 00
1500 trees at \$20 per 100.....	3 00
Setting out at the rate of 5 cents per tree.....	75 00
Cost first year of the 30 acres of orchard	\$495 00
Grass crop worth about \$3 per acre	\$90 00

SECOND YEAR—A crop of potatoes.

Plowing of 20 acres in 20 feet ridges.....	\$40 00
Cultivating, manuring, and preparation of ground, \$5 per acre.....	100 00
Seed for 20 acres at the rate of 12 bushels per acre at 50 cents.....	120 00
Planting at 50 cents per acre.....	10 00
Hoeing, weeding and plowing, \$2 per acre.....	40 00
Digging and securing crop at \$1 per acre.....	100 00

Expense of potatoe crop.....\$110 00

Cost of plowing ten acres of rows of trees at \$3 per acre.....	\$30 00
Cultivating the same 3 times during the season.....	20 00

Interest and taxes for 2d year.....	120 00
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Total cost of 30 acres of orchard for the 2nd year. \$380 00
 Cr. By 20 acres of potatoes yielding 200 bushels per acre and worth 30 cents per bushel unmarketed...\$1200 00

THIRD YEAR—Oats and seeding.

Plowing, harrowing, seeding and sowing 20 acres of oats with 2½ bushels of oats, 10lbs of clover and 1 peck of mixed timothy and red top, at \$6.37 per acre.....	\$137 40
Harvesting and thrashing of oats at \$4 per acre.....	80 00

Cost of 20 acres for third year.....\$207 40

Plowing and cultivation of trees, same as last year.....	50 00
Interest and taxes on land.....	120 00

Total cost of thirty acres of orchard third year....\$377 40

Cr. By oats crop of 50 bushels per acre at 40 per cent's bushel.....	\$400 00
By straw at \$5 per acre.....	100 00
By growth of clover at \$2 per acre.....	40 00

Returns for third year.....\$540 00



Diagram showing a section of the orchard when plowed, and cultivated according to the plan. o, o, mark the position of the first tile drains, which will be immediately under the dead furrow, when the whole thirty acres will be cultivated for fruit alone.

RECAPITULATION.

Outlay of first year.....	\$495 00
do of second year.....	580 00
do of third year.....	377 00

Total outlay for three years.....\$1452 00

Income of first year.....	\$90 00
do of second year.....	1200 00
do of third year.....	540 00

\$1830 00

Thus it will be seen that the cost of the orchard and its cultivation, with moderately estimated crops in return, will give a profit of nearly \$400 for the first three years, without making any calculation for the increased value of the trees, which at the end of the fourth year would probably average a yield of a peck per tree, and thus show a return of \$200 interest on the investment, or that at ten per cent the trees were worth \$2000, which would have to be added on to the profits for the three years.

We do not know that Mr. Emmons will carry out the above calculations, but we consider them worthy of attention by fruit growers, and all who are setting out extensive orchards.

Plymouth Stock.

As a matter of course, while in the town of Plymouth, we paid a visit to the farm of Silas Sly, Esq., who is noted as a breeder of Shorthorns, and who has borne off as many premiums at our state fairs as any one man in this important class. One particular reason for this we suppose lies in the fact that, probably there is no better judge and no more attentive superintendent of good stock than his very amiable and hospitable lady, Mrs. Sly, who knows and loves a choice Shorthorn fully as well as the best breeder in the Union. And we all know that where ladies take an interest they are determined to be first.

Mr. Sly's stock came originally from Rensselaer county, N. Y., from the stock of Jacob A. Fonda of Hoosick. He brought from thence Bellflower, La-

dy Wellington, Red Jacket and White Jacket, four heifers calved between 1848 and 1850 and, all of them of the first quality. One of these cows, Bellflower, is now the property of his daughter, Mrs. N. Merrit, but the other three are still on his farm, and are evidences of the excellence of the selection. They all possess an evenness of size and quality, which makes them remarkable: small heads, with not much development of horn, fine thin necks with good depth of dewlap, though not extraordinary width of chest, good shoulders, a straight back, with ribs level, and loins broad, hip square and broad, and hind quarters full, and well cushioned both front and rear; limbs fine and feet neat and small; milk properties apparently good, and well combined with the early maturity and fattening qualities. The whole characters of these cows place the animals in the first class of Shorthorns. They come from the early importation it is true, but these importations were made from the herd of the best breeder in Great Britain, of his day, namely Thomas Bates of Kirkleavington, combined with that of the Cox and Bullock stock, which were of first rate quality. To show how pure these cows are, we will take Lady Wellington, and trace her back.

Lady Wellington was sired by the Duke of Wellington, a bull imported by George Vail of Troy, N. Y., from the herd of Thomas Bates of Kirkleavington, England; his registry was 3654 in the English Herdbook, and 55 in American Herdbook. The dam of Lady Wellington was sired by Nero, a bull bred by Ezra P. Prentice of Albany, N. Y., a gentleman who was one of the most exact and spirited in his importations of any of the breeders of 1836 to 1845. Nero was recorded in the English Herdbook as 4556, and in the American Herdbook as 111. The grandam of Lady Wellington was sired by Nelson, one of the two bulls imported by Messrs. Cox & Wayne, of Albany N. Y., in 1822. One of these

bulls was named "Comet" and was a light roan, the other was "Nelson," and he was red in color, and his dam was sired by Young Favorite, his grandam by the celebrated Favorite 252 of the English Herd-book, g. g. dam by the Lame Bull, and his g. g. g. dam by Hubback. The dams are all known as celebrated Shorthorn cows of pure descent.

The great grandam of Lady Wellington was sired by Comet above mentioned, a bull of equally as good descent as Nelson; and her dam was out of C. R. Colden's herd of Shorthorns, of the early importation of Mr. Cox.

The Bullock stock was always valuable for its size, its early maturity, and for its milking properties, which were first rate. We, in 1845, owned a cow of Matthew Bullock's own raising, which was said to have been one of his first calves from the imported stock, and so old that she had lost her teeth, and yet she gave milk that in quality and quantity was surpassed by that of but few five year olds. They were fine in the head and neck, with broad backs, and extreme depth of flank, and heavy quarters with small boned, rather short legs.

We have been thus particular with this herd of cows, because they are among the best in the State, and the whole of the stock on this farm possess their characters and are of the same tribe or family as that of Lady Wellington.

The bull to which these cows have been mostly bred is Lord Byron, No. 661 of Vol. 2 of the American Herd Book; he was calved in 1850, by a cow imported in 1836, and sired by Old Splendor, whose stock has always been a favorite. We saw Lord Byron on the farm of Mr. Cyrus Fuller, and his appearance bears out his character. He is not of the largest size, but there are as few bad points to be picked out in him as any animal of his kind. His hide is mellow, and handles well, it might be called a little too fine. He is well proportioned, and his stock is of good quality. This bull is now for sale, as Mr. Sly wishes to infuse other blood into his herd.

As an instance of the thrifty growth of this stock, we cite a yearling heifer named White Jacket 2d, which when turned out to grass on the 12th of May weighed 495 pounds, on the 7th of July she was again weighed, and found to be 800 pounds; on the 25th of July she was again weighed and found to be 856 pounds. During the same time the yearling bull Wellington 3d gained 258 pounds; and 24 yearlings taken together were all found to have gained between 150 and 300 pounds each.

Wolverine is a white bull now two years old, out of Lady Wellington, by Lord Byron, he is of good size and weight, and his points are well developed, for his age. He is a good animal but not of the right stamp to use with Mr. Sly's cows. This seems to be admitted by Mr. Sly himself, for he has sent some of his best heifers to various bulls throughout

the State, one being with Lenox at Mr. Uhl's, another with Sirloin at S. W. Dexter's, a third at Deacon Well's with Duke, near Tecumseh, and two others are about to be sent down to New Years Day in Ohio; whilst another is to go to Coldwater to Orpheus.

Of the stock sold from this farm the present season, Mr. D. W. Palmer of Clinton writes us that Mr. Edwin Smith of Clinton purchased Bellflower 3d, and Red Jacket 3d; Mr. Thomas Briggs of the same place purchased White Jacket 3d; and S. W. Palmer of Norvell bought White Jacket 2d. These heifers we saw while visiting Clinton last month, and their appearance fully justifies their selection. Crossed with the Halton blood that is in Duke, the bull imported from the herd of S. P. Chapman by the Northern Lenawee Association, there must be some stock raised in that vicinity which will be difficult to excel.

Marsh Improvement.

In the town of Bridgewater, Washtenaw county, within three or four miles of Clinton, is a large and extensive marsh, comprising nearly or over two thousand acres. Until within a few years this marsh was covered with a dense growth of willows ranging from ten to twenty feet in height, and it was also covered during the greater part of the year with water to the depth of two or three feet. Part of it was open, and covered with a thick growth of the common marsh grasses mixed in some places with flags. Here in the autumn many farmers resorted to cut grass for winter feed, when fearful the supply of the better qualities of hay and straw would not be sufficient to carry their stock through the winter; and frequently the mowing would be done with the water reaching to the knees of the workmen. Five years ago Mr. Edwin Smith of Clinton purchased a portion of this marsh from the government, and in the year 1853 commenced a series of improvements, which he is still engaged in carrying out, for the purpose of rendering this marsh capable of yielding him a supply of hay made from Timothy and Redtop. These operations we will give in detail, as full of interest to the farmers of the State, and also as affording a knowledge of one of the most economical methods of reducing and improving a marsh with which we are acquainted. The portion of the marsh owned by Mr. Smith was purchased in the fall of 1852, and the next season in company with other proprietors, an outlet for the water was made of about a mile in length which conveyed the water into a branch of the Raisin river. This operation lowered the water so that the surface became dry the succeeding autumn, and a series of open ditches were commenced, the mains conducting directly to the outlet, with branches at right angles reaching to the edges of the marsh. These were made four to four and a half feet deep, and six to eight feet in width. On

one hundred and twenty acres. Mr. Smith cut three and a half miles of these ditches. These were not cut altogether or in a single year, but from time to time as the improvement progressed. The mains were planned and cut the first year, or in 1853. In the winter of 1852 and 1853, a portion of the marsh, to the extent of twenty acres had the willows cut down, and piled together, to dry previous to being burned, which was done as soon as the tops were sufficiently seasoned.

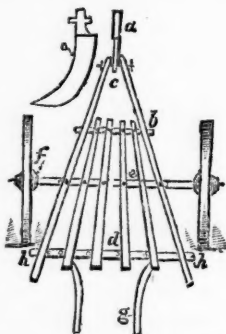


Diagram showing frame of Root Puller, for four teeth.

In the fall of 1853, after the draining had rendered the surface pretty solid, it was determined to devise ways and means by which these twenty acres should be cleared of the roots and stumps of the willows which had been cut and burned. To perform this work a grubber was contrived, and constructed of the following form: A strong triangular shaped frame was made of hard wood scantling, and fitted at *a* so as to receive a wagon tongue, with a strong iron bolt at *c*. The short ribs were strongly bolted together at *b*, and also a cross piece at *d*. At *e* there was another cross piece, to which each rib was fastened by a bolt, with a screw and nut. Across the middle of this frame the hinder axle-tree and wheels of a wagon were fastened, as seen at *f, f*, in fig. 1. The frame was about five feet in length. The frame had somewhat the appearance of a triangular harrow set on wheels. Attached to two of the ribs as at *g*, were two handles stretching back about two feet. Across the rear end of the frame, behind the wheels, at *h h*, was another cross piece, fastened to the under side, and into this and the ribs were set strong iron teeth, made of tough metal. In shape these teeth were somewhat curved and bent forward like the coulter of a plow. There were four of these teeth in the machine made by Mr. Smith; and they passed through the cross beam, and were secured by nuts and screws which brought the shoulder tightly up to the beam, and gave the teeth strength and firmness. The shape of the iron teeth is given at *o*. A yoke of oxen or a pair of horses dragged this machine along, the wheels making its motion easy for them. The teeth, which were kept at a depth of two or three inches, gathered and raked up all the

small grubs on the surface, cut the roots of the grasses, and as it came to a clump of willow roots, the man who held the handles, threw his weight on them, pressing the teeth of the grubber in the ground, and the team pulled the clump out without difficulty, turning it over, and passing along to the next. In this way three or four acres were cleared of willow roots in a day. These roots brought with them a mass of peat. The whole was pulled up and left to dry till the succeeding season. Meanwhile, the marsh grasses dying out, the soil threw up a terrific crop of weeds, which were from four to six feet in height, and in flower at the next mowing season. These were mowed off smooth, dried and burnt at the time that the willow roots and peat were set on fire. The whole mass burned freely, and left behind only a heap of ashes. These were spread, and immediately after a small two horse prairie plow, procured from Emery's warehouse in Chicago was set at work to turn the seed. This it did with a furrow to the depth of four, and a width of twelve inches, leaving a perfectly flat surface. Over this surface a small fine toothed harrow was passed, and timothy and redtop seed sown immediately after. The succeeding season, gave a full crop of excellent hay, in which there was some wild grasses, but the second season, the timothy and redtop seemed to have full possession.

On this marsh land of Mr. Smith, the whole series of operations and the results of his work were to be seen in progress. In the centre of the marsh next his main drains, was a number of acres bearing timothy and redtop, and in which there were but few other plants or grasses to be seen; the crop was heavy, and the growth rank. Next to this was a piece which had been improved a year later; this had timothy and redtop on it, but they were intermixed a good deal with blue joint, and some sedge grasses, and a few weeds. On the next section there was nothing but weeds, and the piles of willow roots; and next to this was a piece where the willows had been cut down and lay in brush heaps. Both these were to be burnt off as soon as the hay crop was gathered, and whilst the help was on hand. The section adjoining the latter, was a tract of some forty acres, on which the willows were still growing in their natural state, and which was as yet unimproved. It was the design of Mr. Smith to cut the willows on twenty acres of this piece this season, besides following up his rotation on the other sections of his marsh.

By way of experiment, and also from necessity, a portion of the marsh ready for the plow last fall was left until the past spring, an opinion being prevalent that spring seeding would do better, than that sown in the fall. The results show that this was a fallacy. Where the timothy and redtop were sown last fall, there is now a good crop of hay; where the seeding

was done in the spring, the growth is extremely light, and will be of little value this year.

This system of treating a large marsh is one of the best with which we are acquainted, especially where it is desirable to bring a large tract into profitable cultivation, with as small an outlay of capital as possible.

The effect of giving the water a free outlet, was very perceptible, in the change of vegetation which it caused. On places of this marsh where flags, and cat tails had grown six and eight feet high, before the drains were cut, they had disappeared after the second year, or had dwindled into a size and growth that gave little trouble.

At Brooklyn in Jackson county, A. P. Cook, Esq., has made some valuable improvements in marsh lands in the neighborhood of the village, which are beginning to open the eyes of farmers to the value of some of the tracts which they have heretofore considered as useless. The details of Mr. Cook's operations, we are not familiar with; the day on which we were at his farm being wet and unpleasant, we could not get over the whole of the land which he had improved. But the effect of drainage was very perceptible. He had already cut, previous to our visit, from a piece of firm meadow, which had formerly been considered of no value, a full crop of timothy and clover hay. The surface of this meadow, which was made from marsh, was firm and hard, and showed but little evidence that it had ever been otherwise. In subduing the surface, and getting rid of the wild vegetation, he had found buckwheat a valuable crop.

On Clearing timbered lands.—The Best Methods of getting rid of the timber and brush.

MR. EDITOR :—In answer to your correspondent from Lansing, I would say, that I have had considerable experience in chopping and clearing timbered land, and have my own views as to the best and cheapest way of clearing land, though I am aware, that many will differ from me. I fear I shall make bad work, describing my mode of clearing on paper, but, could I see your correspondent, I have no doubt I could explain it to his entire satisfaction. The old way of chopping up the timber, and piling the brush by hand, is quite too slow for these fast times; and so, to my mind, is the newly recommended way, of girdling the timber, and then waiting for it to burn down or not, without chopping; for it puts too far off the day, when the land may become a clean cultivated field.

I will now try, to describe my way of chopping and cleaning land. I would chop a fallow into what woodsmen call jam piles. After concluding on the extent of the fallow to be chopped, I would take a general view of the timber, noting how the trees leaned, and where piles could be made to the best

advantage, I would then choose and mark places for piles, at about the rate of three piles to two acres. I would choose open places, or places where there was little or no large timber for piles, for the surrounding trees generally lean into such places; besides, high trees, standing near the centre of a pile, in falling, would throw their tops beyond the intended bounds of the pile, and the brush would have to be thrown back by hand. I would then commence by cutting and throwing in, the underbrush, at and near the centre of the pile. I would then cut one of the trees nearest the centre of the pile, falling it as near across the centre as I could; then follow along the body, and lop off all the large limbs (this I think essential, to secure a good burn); then take the tree nearest the top of the one already cut, and fall it back along the body of that, then fall another, and another, lopping off the limbs as at first, going back and to each side, until I had made the whole circuit of the pile. I would not cut up the limbs, until after the fallow was burnt, as I could then tell better where it needed to be cut; but where trees crossed each other in the pile, so as to lie up too high, I would cut them off, so that the pile would come together. When I found a tree which leaned away from the pile, I would go back until I found one leaning towards the pile, and use that to drive the other. Sometimes four or five trees will have to be drove at once; in doing this, I would cut the tree, or trees to be driven, on the side towards the pile, then go back to the tree that would drive them and fall it against the others, so that it would lodge; then cut them, until they all fall together. But this would be dangerous, to one inexperienced. Trees nearly straight, may be thrown over by a pole. In making these pile, one has occasion to use all the ingenuity he may possess, and the more he has, the more successful he will be in falling timber. The small limbs along the bodies of the trees, should be thrown in, towards the centre of the pile; that, and the under brush, is all that will need to be handled, only when trees reach over, then the tops should be thrown back. I used to say, I made the trees pile their own brush. I put from half an acre to an acre in one of these piles; just as the timber will come in best. The shape of the pile should also be made to suit the timber. One of these piles should occupy a space on the ground from two to six rods across, according to its size and shape. Care should be taken not to cross the trees out side of the brush, as they will not burn as well, or log to so good advantage. Very large trees should be felled so that their bodies may lie on the ground, and in a place convenient to roll other timber to them. I used to chop my fallows in the winter, and burn them any time from June to September, as the weather seemed most suitable, but I think the best time to chop, is from June to Sept., burning the next year. Timber cut

within that time, will burn better, and the stumps are less liable to sprout. But few after the first year, can get time to chop during the summer months. All the directions necessary for logging are, make the heaps if convenient, so that the ground will descend towards them, and so that the timber will not lie with the end fronting the heap. Never draw one end of a log close to a heap, leaving the other some distance off; it will be found much easier to roll the whole log, than to shove up one end. The advantages of this mode of clearing land are, it requires but little more labor than the ordinary mode of slashing; the brush are piled without being handled, and better than they could be piled by hand. The timber convenient for logging, being brought near together by falling towards a common centre. If you get a good burn, at least one third of all the timber will be consumed, (I have had the largest piles burn, so that I could drive a cart and oxen through the centre). The first crop will nearly pay all expenses of clearing, (I never got less than twenty bushels of wheat to the acre), and what is the greatest consideration of all, you have a clean cleared field, with no unsightly girdlings and old falling trees, keeping the ground covered with broken limbs. Some of the disadvantages (others have described the advantages) of girdling are, it is a long time before much, if any benefit, is derived from the land, and when it becomes a well cleared field, it will be found to have cost as much as by any other mode. When the under brush is cut, and the timber killed, the ground is immediately covered with briars, thistles, mullens, elders, and many other weeds, making an almost impassable barrier. Fencing and pasturing will not prevent this. Seeding to grass, would prevent the evil, if it could be go in before the briars, but it cannot, unless the ground is burnt over the first year; and after all, most of the timber will have to be cut and logged, for, whoever expects to burn up standing timber, will be sadly disappointed. If any one doubts this, let him set fire to a dead tree any try it.

Yours most respectfully, G. SMITH.

Ronald, Aug., 18th, 1857.

A Hint to Agricultural Students.

The London Society of Arts hold an examination of candidates for their fellowships in proficiency in agricultural Science and practice. This agricultural proficiency is measured by ability to explain, to act and to foresee. The following questions are accordingly drawn up with a design to ascertain the ability of those who seek the honor of the Society, which when conferred, at once raises the candidate to the rank of a professor; they are arranged also under the three divisions of *explanation, practice, and estimate*; and serve to show what is now expected of a thorough first class farmer in England:

I.—AGRICULTURAL EXPERIENCE.

1. Explain the greater efficiency of the deeper drain in soils of extraordinary texture.
2. To what is the increased fertility due that follows the burning of a clay soil?

3. Explain the action of lime on the soil; and say under what circumstances is it wrong to apply it along with manure.

4. How does the operation of tillage implements increase the fertility of the soil?

5. What is the reason of the decreasing fertility consequent on the continued cultivation of one crop on the same land?

6. State the explanations generally given of what is called the Clover sickness.

7. In what way does the use of a caustic wash to the seed hinder smut and bunt in the Wheat crop?

8. To what causes has the Finger and Toe disease in Turnips been attributed?

9. How do shelter and warmth promote the fattening of cattle and sheep?

10. Why is the excrement of growing stock less valuable as a manure than that of full-grown fattening cattle?

II.—FARM PRACTICE.

1. Name and describe the best roller, chaffcutter, and churn.

2. State the ordinary cost per acre of hand-hoing Wheat, singling Turnips, mowing Clover, cutting Wheat, pulling and pitting Mangel Wurzel, and digging and harvesting Potatoes respectively.

3. What are the hands men and women, employed on an arable farm, likely to be engaged in during the months of June and October respectively?

4. Calculate, from given prices of the horse-food under the different modes of stable management, the average daily cost of a pair of horses; and calculate from that the expense of ploughing, harrowing, and rolling per acre.

5. State the cultivation, for the year, of an acre of light soil after Oats, bearing a crop of Rye followed by Swedish Turnips; and estimate the cost of its cultivation from September till September.

6. State the probable yield per acre, on good land, under good culture, in South or Midland England, of Wheat, Barley, Oats, Beans, Mangel Wurzel, Swedes and Potatoes.

7. What is the cost of a ton of Turnips?—justify your estimate by stating the particulars of the crop on which you found it.

8. Describe two or three of the best varieties of Wheat, Turnips, and Mangel Wurzel, respectively.

9. Name four of the commonest rotations of cropping respectively, stating the amount and value of the several crops per acre.

10. Name the crops in their order from which on arable land a succession of cattle food can be obtained all the year round.

11. State the quantity and kinds of the daily food of a cow in milk, and of a fattening ox respectively, under liberal treatment during autumn and winter.

12. State the distinctive characters of two of our best long-wolled breeds of sheep and of the Southdowns, respectively.

13. Describe the three best breeds of cattle, and give the history of the Short-horns.

III.—ESTIMATE.

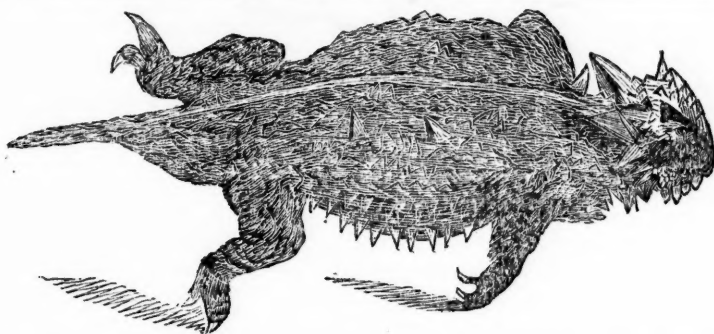
1. Estimate, under the head of rent and taxes, seed manure, labour, purchased cattle food, and loss by depreciation of live and dead stock, the annual expenditure on 100 acres of good arable land.

2. Estimate under the heads of Wheat, Barley, and increased value of live stock, the annual returns from a farm of 100 acres of good arable land, cultivated on the Norfolk rotation.

3. What will be the amount of your expenditure after harvest in rent, purchase of live stock, and manure respectively, on 100 acres of good arable land cultivated on the Norfolk system—and when must these several demands be met?

4. What kinds and quantity of stock must you purchase to consume 20 acres of Swedes and 30 acres of Mangel Wurzel during winter, the stock already on the farm being a flock of 200 ewes, to lamb in February and early in March?

5. How many hands will you, under ordinary circumstances require to get in 150 acres of Wheat, Barley, and Oats—50 acres of each—within the harvest month? And how many of them would you save by using Dray's Reaping Machine?



The Horned Lizard of Texas.

A gentleman recently gave us a specimen of this very interesting, and beautiful animal, which he said he had found in the cars, on the Michigan Central Railroad.

Although remarkably harmless, these animals have a singularly formidable and forbidding appearance; the entire body, and especially the head being armed with a number of short, strong spines, which nature has kindly bestowed upon it as a means of passive defence. From the great ductility of the scaly cuticle the spines on the body are easily movable, but the much stronger spines on the head, all of which point backwards, are immovable. The bases of the spines on the back, appear to arise out of a beautiful circular patch of black velvet, surrounded by a pale yellow ring. At the base of the skull is a patch of bright yellow, distributing a semi-circular margin of the same color to each shoulder; and from its centre runs a lighter line along the body to the tip of the tail (which is little more than half an inch long,) dividing the body into equal portions.

The rows of spines which constitute the boundary line of each side of the body, are also yellow; whilst the staple color of the body is a rich brown; the belly, composed of scales of great uniformity of size, is pale yellow, with small black spots sparsely scattered.

These creatures require a great deal of heat, and they are indigenous only to hot climates, they are abundant in Brazil, no less than in Texas. Having on a former occasion possessed two of these creatures, both of which died from the effects of cold, we have taken especial care of this little pet, and wear it constantly inside our vest, and at night it sleeps attached to our flannel waistcoat. The heat thus supplied to it, appears to have been of great advantage, and it is at this time, the most remarkably active, little creature we ever saw.

Like most of the animals of the class to which they belong, and like the *Batrachian* reptiles (Frogs and Toads), they are not only *carnivorous* but *predaceous*—they will only feed on living insects. In our experience, flies are the only insects these an-

imals prey on, and a prettier or more remarkable sight cannot be imagined than to see the creatures seize their prey. We feed it daily with flies, and spiders, and have delighted many friends by the curious and interesting spectacle which it presents when feeding. We present a portrait of the animal, size of life: it measures from snout to tail $4\frac{1}{2}$ inches, and across the body 1 inch and three quarters.

We had our specimens in this city, during the height of summer; when the sun shone hotly in at the windows in the afternoon, they were remarkably active—running about the room in quest of prey. But when the sun declined, they became torpid, and remained so till about 2 o'clock next day. The cold of the nights destroyed them.

In Texas they are said to be great and universal pets, allowed to run about the table-cloth at breakfast, and dinner, making an ample repast of the flies found there.—H. G.

County Fairs.

The Kalamazoo County Fair is to be held at Kalamazoo on the 22d, 23d and 24th days of September, and is to be addressed on the afternoon of the 24th by Joseph R. Williams, Esq., President of the Agricultural College at Lansing. Amos D. Allen is the Secretary of the Society.

The Washtenaw and Wayne Union Agricultural Society will hold its fair at Ypsilanti on the 7th, 8th and 9th of October, and promises to be very successful. Every exertion is being made by the officers to render the exhibition one of the best in the State. The Hon. R. McClelland has been invited to deliver the annual address. This Society includes the western towns of Wayne, and the eastern towns of Washtenaw counties.

The Washtenaw County Agricultural Society holds its fair at Ann Arbor on the 7th, 8th and 9th of October. We perceive that the premium list is a liberal one, and that the interest felt in rendering the exhibition meritorious, is such as to secure a good fair. L. Davis Esq., of Ann Arbor, is Secretary.

The Berrien county fair will be held at Niles on the 23d and 24th of this month; R. W. Landon is secretary.

THE MICHIGAN FARMER, as usual, will have an office on the Fair Ground, where we shall be pleased to see all its friends. The books and accounts will also be there during Tuesday, Wednesday, and Thursday, and we hope all who are in arrears will call and settle at that time.

Jottings by our Agent.

Erie, Monroe Co. Aug. 15.—Much rain fell last night, and as it still continues falling, I have concluded to enjoy this cosy little room under the hospitable roof of our friend A. J. Keeney, and devote a part of the day to noting a few jottings.

Through a part of Oakland where I have been this summer, and through Wayne and Monroe counties generally, I have found farmers almost discouraged about trying to raise wheat on account of the weevil. The Mediterranean seems to have stood it best in these counties, being the least injured by the spring freezing, or the fly. The barley crop, of which there was considerable sown, especially in this county, has come in good. Generally over this lowland glade of country, embracing Monroe, Wayne, and a part of Oakland county, the corn crop is not promising, and the potatoes are much injured, owing to the late spring and much wet. But I have seen in these counties many pieces that are excellent, of both corn and potatoes.

Yesterday, in company with Mr. Keeney, I examined his potatoes, of which he has a fine field on a gravelly knoll, and we found signs of the rot on both vines and tubers quite generally over his field. Oats and grass in these counties give heavy crops.

Peas. July 29th. Mr. D. W. Arbour, of Redford, informed me that he had counted from eleven to eighteen pods to the vine, and that his pea crop was mostly loaded in this way. I bespeak a peck of those peas of Mr. Arbour for seed if they come in sound and not buggy.

It gives me pleasure to witness as I pass along, the emulation that has sprung up and is gaining strength among farmers in the improvement of stock. Scarcely a day passes without my attention being called to this fact. July 28th, Mr. A. J. Crosby, of Southfield, showed me two beautiful breeding sows, Suffolk, from which he is raising a splendid stock; and on the 29th, I saw at Redford, on the farm of W. P. Griffin, Esq., a boar and sows, cross of Suffolk and Essex, good stock. Of horse stock, there is in the same town, belonging to Mr. J. D. Perry, a yearling colt, most perfect in symmetry of body and limb; I presume not beaten in the State—may be in size but not in form. On the farm of J. Johnson, Lasalle, 13th inst. I was shown a pair of two year olds, one a beauty, equal in height. I tried to chin one of them standing on my tip-toes, but could not quite reach.

It is truly gratifying to see the spirit of improvement that is abroad in regard to neat stock. I saw many fine specimens in Southfield, Redford and Plymouth, among which I would mention the stock of W. Congdon; and in the vicinity of Monroe, our friend, Mr. Keeney, with whom I am stopping, has a fine herd of cows, that show a superior race of na-

tives, from which he has bred a yard full of promising calves with his noble Devon bull, purchased of Mr. Bartlett, of Lasalle.

On the 14th inst., I examined, by request, the extensive nursery grounds of Messrs. Bently & Ilginfritz, of Monroe, gentlemen who are reliable and worthy to be patronized, if their neighbors are to be believed. This is a nursery of clear, handsome bodied trees, liable to no mistakes about kinds, for they have been very precise to have but one kind in a row. The trees have been well tended, and are thrifty growers, but the growth has not been forced by manures, so it may be concluded they are hardy as well as thrifty. Their trees are all root grafted above one year's growth. I saw some of four years old now in bearing. Mr. Ilginfritz informed me that they have one regular established price, and charge nothing for packing to fill orders. He recommends spring setting out as the most sure to succeed. I think citizens of Michigan wishing to purchase either orchards or nurseries, would be safer to buy at this nursery in their own State than to send abroad.

J. A. BALDWIN.

Wool Growing.

MR. EDITOR:—It is a matter of much importance to us as producers, that we raise the varieties of grain and propagate the kinds of stock which will bring us the greatest amount of money, for the labor bestowed and the food consumed. I design to say a few things on wool growing, as wool has become one of the staples of Michigan and as it is of the utmost importance that we should have correct notions on this important subject, and practice accordingly. I assume the position that all animals of like kind consume food according to the weight of carcass, consequently it is for our interests as wool growers that we propagate and keep the kind of sheep which will produce the greatest amount of wool and of the best quality, according to the amount of food consumed. I claim that the Spanish Merino is that kind of sheep. It is a well known fact that the Spanish sheep are a small, well developed, hardy race; their wool is thick, long, oily and fine, consequently heavy. It always brings the highest price in the market. As we are at a distance from any reliable meat market I shall say but little on the subject of raising sheep for the butcher, but I ask, who can afford to keep a sheep that will weigh 130 lbs. live weight, which will clip only five lbs. of coarse wool, and then sell him to the butcher for twenty shillings, when two Spanish Merinos weighing 60 lbs. each, clipping ten lbs of first quality wool may be kept on the same produce? The figures would stand thus:

One coarse sheep to the butcher	\$2 50
Cr. By five lbs. of wool worth 35 cts	1 85
Sheep and wool worth	\$1 45

Two Spanish Merinos worth 20¢ each \$5.00
 (r. To ten lbs of wool at 45 ct. 4.50)

Sheep and wool worth \$9.50

It is not our business as producers to make the speculators rich, but to take care of ourselves. We believe that the farmer who keeps a flock of coarse large natives, loses at least one half the produce consumed by them. Again we say it is the privilege as well as duty of the farmer to keep that kind of stock which will produce the greatest amount of money from the produce consumed.

Yours,

JAS. CLIZBE.

Quincy, August 17, 1857.

The above remarks of Mr. Clizbe on the value of sheep, we believe, contain nearly the general opinion of a great many farmers throughout the state. We do not think them entirely correct, nor do we consider that the figures do justice to the best coarse woolled and mutton producing breeds.

There is too little attention given to correct principles and practice in the breeding of sheep. A farmer begins with a fair flock of common ewes, and in seeking to improve them, what is his method? He seeks for a buck that is rather better than his own, paying probably as high as ten dollars for him; he gives little heed to the fact the animal is only a grade, and can only partially improve his flock, and that after the first generation, all marks of improvement are obliterated. Yet with this buck, he crosses and recrosses his flock, selling off his old ewes, and breeding in and in with the purchased buck, without regard to selection, until his flock in two or three years, becomes thoroughly debilitated and unsound, lacking in constitution, size, and every element that renders domestic animals valuable. These sheep, however, are called Spanish Merino, or grades, and we think with great injustice to that excellent race. If this pernicious system be pursued with a breed so widely spread over the state, need we suggest what the consequences are likely to be with other breeds, possessing qualities equally as valuable. First rate flocks of any breed are the exception, and possessed by but few farmers in comparison with the whole number engaged in wool growing; but from actual observation, we are inclined to think that a better knowledge of their own wants is becoming more general. The information necessary to promote advance in this department of farming, we shall furnish from time to time, as a withdrawal from all other business, and a complete devotion of all our time and the whole of our energies to the Farmer and to the agricultural interests of the State, permits us to become personally intimate with the farming community of every county.

While Mr. Clizbe's remarks actually refer only to the profits of the Spanish Merinos, when compared with the "Natives," they seem to include all the long and middle woolled varieties; and before he or

any other writer can come to such sweeping conclusions, they must have actual experience on which to base their premises, and we should be pleased to have them point out a single large flock of the kind in the State. The Spanish Merinos are a hardy, compact, fine woolled race, whose fleeces bring the best prices of fine wool in the manufacturing market, and as mutton sheep, they are even better than most of the natives. When full grown, the wethers at two years old seldom average over fifty pounds of mutton to the butcher, or twelve pounds per quarter. When put in the market with the natives, the butcher generally finds them the best, because they have been taken the best care of and had the best feed; but they never come in competition with a well bred mutton race. Good flocks of Spanish Merinos were established in Michigan at an early day, and became favorites because the climate and soil, and the facilities for getting wool to market were superior: just as the same variety are now the favorites in Australia. But in Great Britain where meat is in demand, they have had no success as a profitable breed. Meat is in demand now in this country, as a review of the prices will show, and we believe mutton sheep would pay as well as fine woolled. In breeding sheep for the butcher, we want size, weight and early maturity, just as much as we look for these qualities in cattle, where the dairy qualities are considered only as an incidental part of the profits. We have seen quite a number of sheep, of half and three quarter blood, sold this season since clipping time at \$1.00 and \$1.25 per head. They consisted of ewes and yearlings, with some two year old wethers amongst them. These sheep had yielded a clip of three to four pounds, which had sold at an average of 43 cents, some not quite so well. The value of the sheep therefore must have been less than three dollars. Compare these prices with the value of a flock of Southdowns or Leicesters, whose wool weighing six pounds would be worth only 30 cents per pound; but whose carcasses if sold by weight at 3 cents per pound alive, after being clipped, would average 120 pounds, and, therefore, bring \$3.60, the wool being \$1.80, we have \$5.40 per head against \$3.00 for half bred Merinos. When profit is really the end and aim of farmers, and not the success of a prejudice, or an excuse for want of attention in breeding sheep, we will have much more care paid to raising mutton of the best quality. Quarters of mutton retail now at six and seven cents per pound; Mr. Clizbe, will perceive therefore, that a sheep weighing 120 pounds must bring more than one of only sixty pounds, and that in his estimate he is a little one-sided.

A VALUABLE BUCK.—On the 25th of July last, Mr. Jonas Webb, of Babraham, England, held his annual letting of Southdown rams, and the highest bid made on the occasion was 197 guineas, or 985 dollars for the use of a single buck. This sum was given by a Mr Lindsey of New York. Our readers will note that this sum was only for the use of the animal for one season.

Horticultural Department.

A Call to Horticulturists and Fruitgrowers.

The undersigned having been requested by a large number of citizens interested in the improvement of Horticulture and of Fruits, to give notice of the time and place at which a meeting might be held to take the preliminary measures to organize a State Society to promote a correct knowledge of the theory and practice of Horticulture, and to provide for the encouragement of the growth of the best and most improved fruits and vegetables, herewith notifies those friendly to the establishment of such an organization, that the first meeting will be held at JACKSON, TUESDAY, SEPT. 8, AT 1 O'CLOCK, P.M. In accordance with the expressed choice of a large majority of those who have communicated with him on this matter.

R. F. JOHNSTONE, *Ed. Mich. Farmer.*

State Horticultural Society.

The necessity of the establishment of a good and efficient state Horticultural and Pomological Society is much more thoroughly appreciated and understood than we had any notion it was, when Mr. Lyon first called attention to the subject. We have received numerous letters, with a large number of names attached to the call from various places. Kalamazoo sends in fifty names, and amongst them many of her best known and most highly respected citizens. From Jackson we have a number of names. Ionia calls for it, and other counties send in their voices in its favor. Most of those who have written, as yet, suggest Jackson, as being the most accessible and most central point, where the initiatory measures may be taken for the inauguration of this society, and Tuesday the 8th day of September is named as the day on which its friends are requested to meet.

The necessity of a Society which would in some degree prescribe a nomenclature for fruits, and keep within bounds the cultivation of seedlings, as well as encourage the production of new varieties suitable for our climate and soils, and saleable in the markets most accessible, is becoming every day more apparent. In planting out orchards how much money, how much labor, how many precious years may be saved by a thorough knowledge of what has already been done, and decided upon, and which knowledge the transactions of such an association puts on record. Michigan is not destitute of choice fruits, but yet in calculating upon a supply for the great markets, where and when is her name mentioned? Orchards are being started in many directions, and the demand for fruit trees is increasing with every years settlement of the lands of the new counties, which railroad enterprise is opening up; how neces-

ary is it then that we should have some guide within the limits of our own state, to which fruit culturists may look for advice and for guidance, and which they will acknowledge, as having an experience which they feel willing to take advantage of? In the matters connected with ornamental gardening, every day shows to us how willingly, as time and means permit, the man of wealth delights to surround himself with the glowing and ever varying productions of the vegetable world; and in all directions, we note conservatories, greenhouses, graperies, and flower gardens springing into existence, where previously nothing existed except a grass plat, with a lilac bush, a snowball, and a common rose or two, with a few yellow lilies.

With a correct appreciation of garden culture, and an elevated standard to guide us in the production of fruits and the pursuits of horticulture, none can calculate the amount of wealth which will be added to our State, or how much useful and intellectual recreation will be yielded to many, while the employment for both mind and body which a desire to excel creates, will occupy hours that would otherwise be dissipated in frivolities or perhaps in vicious amusements.

Besides, such an association will put us in communication with the societies which are now giving tone and judgment to horticulturists everywhere, in a greater or less degree. It will bring their beneficial effects more closely home to us; and whilst we give them the benefit of an experience solely our own, they in return, give us theirs gathered from more extensive and different fields, but nevertheless as necessary for our complete instruction, as our own. Other benefits might be enumerated but they will suggest themselves to nearly all, without being commented upon.

Notes on Fruit.

(Continued from last Volume.)

BY T. T. LYON, OF PLYMOUTH.

Cherries, Raspberries, Currants, &c.

July 20th.—Gathered the first ripe raspberries—*White Antwerp* and *Fastolf*—the former very fine, large, and beautiful, but too easily bruised to bear transportation—the latter, fully equal in size, more firm and very prolific. Profitable.

22nd.—*Tradescant's Black*, or *Elkhorn Cherry*, is now ripe. Crop a full one—of fine size, and exceedingly attractive in appearance. The trees are also beautiful, pyramidal growers, and appear to be more hardy than most others. Its late period of ripening also renders it desirable. It has, however, been more injured by the curculio than any other variety. It has been steadily improving in size, and quality, with each succeeding crop since it first came into bearing, five or six years since, but is still rather indifferent. It is a long time in acquiring its full color, and, consequently is with difficulty protected from the birds.

Buttners Yellow has now produced a small crop for the first time. The tree is a fine pyramidal grower, and bears quite young. Fruit, of the Bigarrean class; *entirely yellow*; in consequence of which, it escapes the birds—of medium size, and good quality. Valued as a curiosity; as it is the only good yellow cherry known.

Belle Magnifique has produced two or three light crops. It is a very slow grower, even for a Duke. Fruit, large, mild, acid, very fine. Should it grow and bear better, as it gets more age, it will become a very desirable fruit—Would probably last some time yet.

24th.—*Franconia Raspberry* is now ripe. It is firmer than *Fastolf*—of smaller size, and superior flavor—a great bearer—lasts nearly a month.

Currants are now ripe. The writer has plants, received from various sources, as *White* and *Red Dutch*, and also the *Common White* and *Red*; and, after fruiting them together for several years, is unable to discover the slightest difference, either in plant or fruit. In fact, the most careful observation, both here and in western New York, seems to establish the fact that the only difference lies in the mode of culture.

White Grape Currant ripens with the preceding. The bush may be distinguished by its more spreading habit, which is objectionable. It is a great bearer; if possible superior, in that respect to the *White Dutch*. Fruit of similar quality, and with the same culture, a little larger. Desirable.

Cherry Currant is classed by Elliott with the rejected varieties. It certainly is not equal to the others in quality, but it is the largest of the red or white currants, and so attractive in size, and appearance, that few persons seem to accord with his classification.

30th.—*Victoria Currant* is just fully ripe, and may remain on the bushes, without shriveling, for three weeks yet. The plant is apparently rather less vigorous than the "*Dutch*,"—a good bearer; fruit larger than *Red Dutch*,—hardly equal to it in flavor, and a shade lighter colored. Valuable.

Black Naples Currant is ripe. Bush more spreading than the old *Black English*, and a superior bearer; in fact, the largest of currants. Valuable on account of its lateness. Disliked by some on account of the musky aroma common to all black currants, which, however, disappears in the process of cooking. Makes a very rich jelly.

English Morello has now borne for several years, on trees received from two different sources. My trees are evidently of different origin, would seem to indicate the probability that some confusion exists among growers respecting this fruit, which may easily be the case, as it is, in some respects, quite similar to the common *Morello* of this country. The earlier one is a moderate, rather spreading grower,

and an early, and abundant bearer. The later one is a strong, upright grower, forming a beautiful ovate head; and it is a slow, and very thin bearer; but improves in that respect as it grows older. It is a few days later than the former. They are from one to three weeks later than the common *Morello*.

Plumstone Morello has now been several years in bearing. It grows very slowly, while young, but it may improve in that respect with age, and forms a beautiful, rather upright head. It is so far a thin bearer of very large and late fruit, of good quality for cooking. As it is one of the latest, and largest sour cherries, it will, (should it improve in bearing as it grows older,) prove a very desirable fruit.

Aug. 7th.—*Bigarrean Hildesheim* is one of the latest sweet cherries. Tree a rather strong grower, forming an open, spreading head. Fruit apparently of medium size and quality. It is so long in coloring that it is extremely difficult to preserve it till fully ripe, and almost equally difficult to fix its period of maturity. Although said to be ripe now, it would doubtless improve for sometime to come.

Ate the first ripe and perfect apples—*Early Harvest*, and *Carolina June*. The latter bearing a full crop, for a young tree. Many of the earlier fruits are scabby, and small, but the later ones are more perfect. The fruit is very showy, and the perfect ones of fine size for an early fruit. Flavor, at least "very good."

10th.—*Breda Apricot* ripe. Trained against a south wall—has passed through the past two winters unscathed. Is showing a moderate crop of perfect fruit. Has not been troubled by the curculio; but have found quite a number of the larvæ of the apple moth in the premature specimens, a circumstance I have not observed before.

Aug. 12th.—*Black Apricot*, with the same exposure as the above, is now ripe, has suffered much from the curculio.

Madelaine Pear, upon large trees, is bearing a heavy crop, now ripe. Should have been picked a week ago, and house ripened. Has yet no equal in its season.

Aug. 18th.—*Merveille de Septembre*, (*Marvel of September*.) cherry, sometimes called *Tardive de Mons*, has been coloring since the middle of July, and is yet unfit for eating. It is hardly passable when mature, and is only desirable to the amateur for its lateness. May be kept through September.

Espaliers.

While in the southern part of Jackson county last month, we paid a brief visit to Brooklyn, and had the pleasure of finding in that village one of the finest gardens in the State belonging to A. P. Cock, Esq. In it we observed some noble rows of espaliers consisting of cherry and pear trees. The trees were trained to poles 12 feet high sunk in the ground about two feet apart. To these poles the branches of

the trees had been fastened, and trimmed with great care. The pears were laden with choice, clean healthy looking fruit of the most valuable varieties and their branches had been trained horizontally. The cherries were of the Black Tartarian variety, and were trained to spread like a fan. The branches were 12 to 14 feet in height, remarkably luxuriant, and healthy looking, and decidedly the richest and finest specimen of training fruit trees we have seen in Michigan. The soil of this portion of Michigan seems admirably adapted to raising good fruit and the whole of the fruit trees in the garden of Mr. Cook gave evidence of it; more especially when it was known that the garden had been originally graded down to its present level, by a removal of several feet of the top soil.

Tulips and their treatment.

Among the gayest and most striking ornaments of the flower garden during the spring and summer months is a small bed of tulips. This flower is easily cultivated, and with a very light protection will withstand the winter frosts very well. The bed for tulips should be a piece of the flower garden in which there are no other plants. Where the cultivation of this beautiful flower is attempted for the first time, a small bed of six or eight feet in length and three to five feet in width should be made this fall, about the latter part of this month. This bed ought to be dug out to the depth of eighteen or twenty inches, or still better to the depth of two feet, and filled with brick bats or broken stone, or old mortar for about six or eight inches, over this, a layer of old sods, and then the bed should be filled with good rich composted soil. When this bed is leveled off, and well trodden down, the squares should be marked out twelve inches on each side, and at the corners the bulbs should be planted to the depth of three inches below the surface. The plan of the bed should be drawn on paper, and the name of each bulb catalogued where it is set. Having the names of each flower, and comparing its bloom and appearance with the description is a source of great satisfaction to the gardener. No flower is more calculated for ladies to cultivate than the tulip.

During the last season we visited the nursery of J. J. Dougall in Windsor, and found that he had quite an extensive bed, of varieties all properly labeled, and we noted the following named sorts as large handsome blooms, as well as affording a great variety of colors:

1. *Rose Domingo*, large, lilac stripe, with much white.
2. *Reine des Violettes*, white and purple, very beautiful.
3. *Waterloo*, a dark mahogany shade.
4. *Romeo*, a rose tulip, large blossom.
5. *Georgius tertius*, light rose color, with much white.
6. *Secker*, and *Semper Augusta*—both yellow with deep mahogany stripes.
7. *Whittaker's White*, white and large, with a very perfect flower.

8. *Albecque*, white with lilac stripes.
 9. *Catfalque*, a very dark crimson.
 10. *Finlayson's Humpden*, a dark crimson well shaded.
 11. *Bizarre Incomparable*, dark red with yellow stripes.
 12. *Passay's Roi de Congo*, a very handsome, very yellow flower.
 13. *Cecilia*, white and light crimson.
 14. *Washington*, a hyblom n of deep purple.
- DOUBLE VARIETIES.
15. *The Double Scarlet*, very handsome, and necessary.
 16. *General Warrenschaff*, a double yellow.
 17. *Blanc Brodee pourpre*, very handsome, purple and white.
 18. *Bonaparte*, bright crimson rose.
 19. *Violet Antonia*, rich full flower, of a violet color.
 20. *Dugalls Bonaparte*, yellow and dark red.

Mr. Dougall had other varieties, but these we selected at the time as giving admirable contrast and variety, and with a view of recommending them at the proper season for selecting bulbs. A bed six feet long, and four feet wide, surrounded with a board edging, would give room for twenty bulbs if set twelve inches apart, and if set eight inches apart room would be given for forty bulbs. If we get a State Horticultural Society started, amongst the spring flowers for which premiums should be offered none ought to be more prominent than the tulip.

Gooseberries and Raspberries.

EDITOR MICHIGAN FARMER:—It will be remembered that the subject of mildew in gooseberries has been treated of in a former number of the *Farmer*, and that it was claimed that *Houghton's Seedling* and the *Mountain Seedling of Lebanon* were free from this disease. Now I have had the *Houghton's Seedling* under cultivation five years, in which I have let a number of bushes mass together for the purpose of mildewing, if they would, till they now occupy a space of six feet by thirty, leaning over on the ground, catching root, and running wild. This situation this wet season I deem a fair test, presuming that the fruit would mildew now if it ever would under any circumstances, but the berries have not shown a symptom of it. I rest then assured in my own mind that the *Houghton's Seedling* may be justly claimed as exempt from that disease. This plant is naturally a straggling grower, and needs to be trained partly in tree form, for convenience of gathering the fruit, and for appearance. It should be grown upon deep worked soil, well enriched, well mulched—none of which mine has had the benefit of, standing as they do upon hard, flat, stiff soil, single spade deep, only once manured since planted, and never mulched. Still they have this season borne a fine crop of good fruit, quite satisfactory to me. So much for *Houghton's Seedling*.

Now for the *Mountain Seedling of Lebanon*. This, with me, has fruited for the first time this season, and I deem it quite an acquisition. It is of much larger and higher growth than the *Houghton's*, and the fruit is also large and rather later. Like the *Houghton*, it is as hardy as the red currant, withstanding without injury all the extremes of heat and

could of this climate, and showing no symptoms of mildew.

I will say a word or two about raspberries. I have under cultivation eight kinds—four of red, and three of white or yellow. Of the red, the *Antwerp* is perhaps the best flavored, but does not produce much. Another red is a seedling of much promise, of my own originating, a strong grower, and bearing fine, large, conical, deep red, and very good fruit, entirely hardy, very productive, and fine for market. A third kind I call "*Giant*," from its coarse, rank growth of stalks and foliage. It is very productive—fruit large, red, and fine for market. I received it seven years ago, as a present, without a name, but with a high character which it fully sustains. It came from near Canandaigua, N. Y. These two are an acquisition to any fruit yard. The fourth kind is smaller and sweeter than either of the above, but not so marketable. The name I never had.

Of the yellow varieties, I have, first the *Golden Raspberry*, which in the spring throws out enormous cones of a gold color, and yields me fine crops of truly golden fruit of good quality. Second, *Yellow Antwerp*, producing fine delicious, long, conical fruit. Third, *Brinckle's Orange*, which has just fruited for the first time. It is a fine, long, conical, peach blow or orange colored fruit of great excellence and beauty. I am much pleased with it. It is the best flavored of the whole, and the finest looking. I have also an everbearing kind, promising well, but not tested, by me, at least. I obtained it in Indiana through the Patent Office Report for 1854. It is not yet ripe.

I am much pleased with T. T. Lyon's communication on Cherries. There would be more real horticultural knowledge grow out of a general practice of this reporting in detail on the ripening and quality and merit of the various kinds of fruits than can be had by any other plan at so little trouble and expense. It inspires emulation, attracts and calls up attention, and incites to observation.

Respectfully yours,

J. T. WILSON.

Jackson, Aug. 3, 1857.

The Apple Worm Again.

R. F. JOHNSTONE, Esq.—Dear Sir.—By your review of my remarks on this subject in the last *Farmer* it is quite evident that I have not been fully understood by you. You say, "The trouble is that every one who grows fruit will not perform the work of removing the apples as fast as they fall from the trees." To which it may be replied that what was said about placing the apples in a certain room was not said concerning such as had fallen. Again, further on is the passage, "Where the fruit can not be thus taken care of we still think the store hogs or even the milk cows the best preventives at hand." Now to this I fully agree, and never intended to say a

word to the contrary, *i. e.* so far as the hogs are concerned, for I believe they will do the work more promptly and more faithfully than any other laborers that can be employed. Still we observe that more or less of the first droppings (being so destitute of any of the good qualities of an apple) are regarded by these as not fit to be eaten even by a hog.

Hence if we would make thorough work of it such must be disposed of in some way. Cows I am inclined to think would be of no great service, for, while they would not probably look sharp for the last one on the ground, they would be very likely to take more than their share from the trees, and that too without being careful to select the wormy fruit.

When it is said by the "*Fruit Garden*," Pick up promptly all fallen wormy fruits and destroy them," if it were asked what agents should be employed to perform the work, doubtless it would respond the hogs where it is practicable, and where it is not do the next best, employ such as will do the work most faithfully. At least such would be my understanding of the passage referred to. Thus it will be seen that all the extra labor required by my plan, *i. e.*, all over and above that prescribed by all the writers, is just simply this: When the apples are taken from the trees, instead of putting some here, some there, and the remainder in other places, I have

a place and see that they are put and kept in that place until disposed of. Such room would be all the better for having but one window, as that would save the trouble of going from one to another to slay the moths. It would likewise be better for having an inner and outer door, as that would prevent any making their escape while the room is being entered

"on business." But these are matters of no great importance. Still it should be remembered that this room (especially in case of but one door) should be entered as seldom as possible during a certain period of the year, see *Farmer* for August. With regard to a second generation being produced in Great Britain and the eastern States, I know nothing.

Still it may be observed that Cole (an eastern man) says, "It is supposed that some come out soon and produce a second generation;" but this is not more than what you have quoted from Kollar. The reason for believing (or rather I should say knowing) the correctness of the statements heretofore made on this point are just these: For three years past we have slain multitudes of the moths at a certain window during a period of some six weeks (as related in the last *Farmer*) being in the room usually several times during the day for other purposes, these wonderful creatures were uniformly looked after and attended to. At the close of these six weeks and during a period of two to three weeks thereafter not a moth could be discovered about the window. Soon after this some of the new crop were brought in, and shortly thereafter they began to show them-

selves at the window again. This was regarded as evidence full and conclusive. Still there was a sort of curiosity to be satisfied as to the time required to effect so great a change, (a worm into a moth or miller as they are commonly called). This was readily accomplished by winding several trees just below the first branches with strips of woollen cloth; within 24 hours the cloths were taken off and found to contain about a dozen worms, which with the cloth were then placed in a glass jar. On the 9th day one or two were seen in the jar with their new dress (wings &c), on the 10th day several others were thus seen, and thus they continued until all were changed, which occupied some 15 days. From a personal investigation of this subject in all its phases I am led to believe that while much truth has been told by the writers, there has nevertheless been more or less error intermixed with it. The lamented A. J. Downing had not a doubt but these moths could readily be destroyed by bonfires, but we have found that to be only conjecture. He says too they make their appearance in the greatest numbers during some of the first days of June, while Cole says latter part of June and first of July, when they should have said 20th to 25th of June. Again all the writers concur in saying "the eggs are deposited in the eye or blossom ends of the fruit," but a careful examination (while the fruit is but partially grown) will soon convince any one that they are not unfrequently placed where two apples come in close contact with each other, and sometimes where a leaf thus comes in contact with the fruit.

Cook.

Plums and experiments.


When at Jackson a few days ago, we examined some plum trees in the garden of S. O. Knapp Esq., which were laden with choice fruit to their utmost capacity to bear. These trees had only been set out four years, and were yielding the richest returns for the labor bestowed upon them. The soil in which they stand is gravelly loam, slightly tempered with clay. Mr. Knapp had found the sheet and mallet the most effectual preventive of the ravages of the curculio. As soon as the fruit had set, he spread sheets under the trees each morning, and with the aid of a mallet, used in jarring the trees, he had found no difficulty in securing most of the insects before they reached the fruit. He discontinued the practice some time before they disappeared, as he found the trees so heavily laden that a little thinning out of the fruit would be a benefit rather than a loss. Mr. Knapp had paved the ground under his trees with common boulders picked up on his own land. The circle of paving extended about four feet from the stem of each tree; and did not reach more than half way to the outside of the branches. The trees paved around were treated for the curculio in the same way as those which were not paved. It was


observed while jarring the trees that the insects were much fewer on the portions of the trees over the pavements, than on the outside of them; and Mr. Knapp inclines to the opinion that a good hard surface which would afford no protection to the insects would be the most effectual remedy against this pest.


A neighbor of his had tried rolls of cotton wool wrapped round the trees, as preventive, and it was found effectual, until the rains came and packed it so that the insect surmounted the obstacle. To protect the cotton *chevaux de frize*, it is proposed next season to cover each roll of cotton with a strip of cotton batting, which will hang over the loose roll of wool and protect it from the rain.

Mr. Knapp has a number of plum trees located in different portions of his garden and all were laden with the choicest fruit, indicating that his treatment had been effectual.

Horticultural Notes.

 The Fruit Growers' Society of Western New York hold their annual meeting at Rochester, on the 18th and 19th of September. Strong efforts are being made to render this a very successful meeting.


 The North Western Fruit Growers' Association meet at Alton, Illinois, on the 29th of September. This promises to be an important meeting.


 To prevent moles from girdling fruit trees, Freedom Monroe advises that all grass and weeds should be cleared away previous to cold weather, and that when the snow falls it should be trampled down as solid as possible, closely around the stem of each tree. When the snow is damp is the best time to do it.

THE WILSON ALBANY STRAWBERRY.—Wherever this Strawberry has been cultivated the past season, it seems to have done well, and to have given satisfaction as a prolific bearer, and also for its yield of large fruit.

THE PEABODY STRAWBERRY.—The packages of this strawberry sent out by mail to most of the subscribers, were either dead when they arrived, or so weak, that only careful nursing enabled the plants to preserve their vitality. We have as yet heard of none that have fruited, and consequently it will take another year to decide whether this variety is suited for our northern climate. A dozen of these plants, received by us, were so dried up by the time they reached us through the mails, that no coaxing could make them throw out either leaf or root.

THE HORTICULTURAL MEETING.—We have letters from Jackson informing us that every attention will be shown to the gentlemen who may attend the Horticultural meeting called for on the 8th inst.; and it is requested that all who attend will report themselves first at the office of W. K. Gibson Esq., in Cooper & Thompson's Bank Building.

 The series of articles on Insects, written for the *Farmer* by Dr. Goadby, is not discontinued, but only postponed, owing partly to the crowded state of our columns, and partly to the occupation of the Professor in preparing his text book on Physiology, from which we give a few extracts on another page.

 The N. Y. State Agricultural Society has appointed E. C. Dibble, Geo. W. Tift, H. U. Soper, and W. Hodge delegates to attend our State Fair.

The Household.

"She looketh well to the ways of her household, and eateth not the bread of idleness."—Proverbs.

EDITED BY MRS. L. B. ADAMS.

Practical Science for Women.

ED. FARMER :—It is a delightful thought that our farmers are soon to have their labor made doubly interesting by the light which Science will shed upon them, through the medium of the Agricultural College. But the thought has occurred to me—Why may not the farmer's wife and her sex generally share in the treasures to be opened? There surely can be no valid reason why our sex should be doomed, in the future, as they have been in the past, to watch some of the most interesting processes in nature—often with the deepest anxiety in regard to the result, without once comprehending them, or being able to tell how the effect is obtained. Yet this is the case very often in cooking—in butter, cheese, soap and bread making, with many other things equally common.

To illustrate, take one of the most common of the housewife's occupations. As she lifts the foaming dish of "emptings," in her semi-weekly preparation of the staff of life, how often do such inquiries as the following arise in her mind. What play of chemical affinities has taken place in the inert mass I placed by the fire this morning, to produce all this ferment? What gas has been liberated to cause the pungent smell, and why does it become offensive by long standing? If salt is used what agency has it in the matter; or would it do just as well without it? Some add milk but they cannot tell why. Which of its component parts contributes to produce the effect, or is that also useless? What beneficial change does boiling the water make in it? There is a common opinion that frequent stirring is advantageous, while others think it injurious, and some that it makes no difference. Which is right? And why do I sometimes fail of having them rise?

These and many other questions can be asked, but not one in a hundred can answer them. Would it not more than double woman's interest in her monotonous round of duties, if she could trace the beautiful laws of natural philosophy in their operation under her hand?

The occupation of the housekeeper is not now an intellectual one, and as she is, usually, quite closely confined to it, it is not surprising that a thoroughly intellectual wife and mother is rare. But if women were taught to understand the scientific principles involved in their daily labor, they would be able in that to find an exercise for their reasoning powers, and one that could afford them the keenest pleasure.

Besides the enjoyment it would give, they would be able to perform their duties better, and much in-

jury might be saved to the life and health of those under their care.

They are daily handling powerful acids and alkalis—frequently poisons—and often without a thought of the injury which their careless combination with other substances might produce. And who does not know that food is often cooked in such a way as to render digestion very difficult, if not absolutely impossible. Would not the time be well spent which would give to the wife and mother a sufficient knowledge of chemistry and physiology to enable her to attend to her duties understandingly, and in the best manner. Another reason for its acquirement is, that this knowledge would often spare her the contempt of the more intelligent for her superstitious way of accounting for the phenomena which come under her observation. A lady of more than common intelligence on most subjects, once said, in apology to a friend, that she "could not talk while mixing her emptings for fear they might not rise, she had been having bad luck lately!"

But it will be asked, How is this to be done? I will briefly indicate several ways in which I think it could be done.

Let our Female Colleges and Seminaries give their pupils a thorough knowledge of the practical sciences and teach them how to apply them to their everyday occupations. In England, fifty years ago, the boarding school education of a young lady was incomplete until she had made, and richly embroidered, a set of baby's clothes! With all due deference to our grandmother's judgment I must think that the preparation for future housekeeping here proposed is much more intellectual, if not more necessary?

Again, We are to have a model farm, why not have in connection with it a model kitchen?

Perhaps this would be impracticable, but if not I think many ladies (more than would be needed to carry on the housekeeping affairs of the Institution) could be found, who would be glad to avail themselves of the splendid apparatus at the College and the learning of its Professors to study these interesting sciences.

Some newspaper articles on the subject would be very useful, but to my view a lecture or two would be much better, for obvious reasons, and if our worthy Professor of Chemistry, or one of the others, would favor us here in Lansing, it would be a treat for which, I have no doubt, he would receive the thanks of the knowledge-loving community.

BERTHA.

Lansing, August, 1857.

[We commend the above letter to the attention of the Faculty of the Agricultural College. Dr. Goadby, Professor of Vegetable and Animal Physiology and Entomology, pronounces it one of the best and most practical common sense letters he has ever

read, from the hand of a woman. He claims that the suggestions it contains, and the facts and phenomena of which the writer desires an investigation, are of the utmost importance to the physical health and happiness of the human family, and that it is woman's right as well as her duty to press her claims to a share in that knowledge which will not only make light and pleasant her household duties, by enabling her to understand them better, but will also be the means of securing healthful food and consequent comfort to her family. And here we may mention that Dr. Goadby is preparing a work for publication on Vegetable and Animal Physiology, which will be used as a text book at the College, and which will contain a vast amount of just such practical information on every day subjects as all housekeepers need. From this forthcoming work he has kindly permitted us to make the subjoined extracts; and we advise "Bertha" and all others who wish for more light on the philosophy of living, to avail themselves of the knowledge which this book, when published, will give them.]

EFFECT OF ALUM IN BREAD.

"The bones of a young child are *cartilaginous*, or gelatinous; to become *bone*, it is necessary that the *phosphate of lime* be deposited in the *meshes*, or *interstices* of the gelatin. But if *alum* form a constituent of bread, the phosphate of lime of the wheat is neutralised: in other words, mutual decomposition results; for, the *sulphuric acid* of the sulphate of alumina, alum, has more affinity for *lime*, than for alumina; consequently it combines with the lime, and forms the sulphate of lime (plaster of Paris), which cannot be assimilated. The phosphoric acid and aluminium, are set free, and in the way of nutrition. Children fed on bread thus made, are subject to rickets, caries (rotting) of the teeth, and a still more formidable disease, called "*spina ventosa*," in which tumors are frequently formed as large as a human head, and very painful.

In this country, another very objectionable substance is in constant use, to supersede yeast or eggs—*saleratus*; it is only necessary to remind the reader that this agent is a modified *pearlash*, which is a fatal poison.

BATHING.

The preservation of a healthy skin, demands the removal of the entire epidermic layer, by frequent ablution, always accompanied by the liberal use of that valuable detergent—soap.

For the strict purposes of health, neither a plunge, or shower-bath, is necessary; the latter, is even obnoxious to some temperaments: the most comfortable, and healthful form of bath, is at the same time the most facile—a *sponge bath*—expedition in its use, being the most important element.

The bath itself, should never exceed *five minutes*; the rubbing dry (the most important part of the process)

occupying not more than another five minutes—an amount of time that every one can afford, at the beginning of the day. This bath should be taken immediately on rising in the morning, as at such time reaction is greater, and quicker, than at any other period of the twenty-four hours.

It is most important to attend to the temperature of the water, and of the room in which the bath is taken. During hot summer weather, water may be used at the ordinary temperature of the atmosphere, the room indicating not less than 70° Fahrenheit. But at a less external heat than 70° the water should be *warm*, or at least *tepid*.

A sudden cold chill on the surface of the body, is prejudicial to health; it checks the circulation of the blood to the external surface, interferes with the secretions, and particularly arrests the excreting power of the skin.

It is a popular belief with mothers, that washing young children *daily*, in *cold water* makes them hardy. This is a grave mistake; the feeble circulation of a child requires the aid, and assistance of warmth—warm water, and warm clothing. The greatest medical man who ever lived—John Hunter—recommended *three rules* for the management of children, and they express the substance of a volume; he says "give them plenty of milk, plenty of sleep, and *plenty of flannel*." In this changeable climate, children and females are too thinly clad, and the great mortality, amongst females is mainly due to this cause; they are so much exposed to external influences, that they are unable to maintain a sufficient degree of vital heat: hence all their functions are indifferently performed, they sicken, and die.

After bathing a child and wiping its body quite dry, friction all over the surface, and especially of the limbs, with the palm of the hand, in the nature of good brisk, quick rubbing, should be practised till the surface be red—indicative of reaction.

For adults to bathe after a meal, or after fatiguing exercise, is *eminently dangerous*. Three fatal cases were recorded by the New York papers, all occurring within a year, from this sole cause: the first, was the death of an American lady of refinement and position, from taking a bath soon after dinner; of Sergeant Hume, while alone in a warm bath; and of Lorenzo Shepherd, of New York, under precisely similar circumstances.

Those persons who do not happen to possess a sponge, may resort to the following plan with great advantage: as soon as you get out of bed in the morning, wash your hands, face and neck; then in the same basin of water, put your feet at once for about half a minute, rubbing them briskly all the time; then with the towel that has been dampened by wiping the face, feet, &c., rub your whole body well (without the addition of more water) fast and hard, mouth shut, and breast projecting. Allow

five minutes for this operation. There is yet another plan, superior in its effects to all that have preceded it: at night when you go to bed, and whenever you get out of bed during the night, spend from two to five minutes rubbing your whole body and limbs with your hands, as far as you can reach in every direction; let it be done briskly, quickly, and hard.

By this practice the softness and mobility of the skin will be preserved, which too frequent washings has a tendency to destroy.

Equestrianism Again.

That "there is reason in all things," is an old saying which seems to have been entirely forgotten by the editor of the Grand Rapids *Enquirer* while making his remarks on an article against female equestrianism at fairs, which appeared in our last number. A candid reading of that article will show him that his tilt of words was all at nothing, and his volley of low wit spent in vain, for in all that we or our correspondent said, there was not one word against ladies' riding on horseback; and the next time he places us before his readers in the columns of the *Enquirer*, we beg him to let us speak for ourselves; that is, to quote what we say in the sense we say it, not to take disconnected extracts and pervert them to a meaning as destitute of common sense as must be his character of honor or manliness who would attempt such a perversion. Everybody knows that female equestrianism as exhibited at fairs is quite another thing from the graceful, health-giving exercise of horseback riding as practiced on ordinary occasions, and nowhere is the difference better understood than where the former has been most thoroughly tested. A few trials in the States and counties which at first upheld the measure, have been enough, and now the matter is quietly dropped, no mention of it is made in their premium lists, and its whilom stoutest and noisiest defenders, having seen its effects, express no indignation at the public decision.

In regard to riding at the South, it is one of the commonest and at the same time one of the pleasantest customs of the country. We have lived for years in "rural districts" there, where in some directions the churches would be from three to five miles distant, and in others, from seven to ten, and we never thought of going any other way but on horseback. Everybody went on horseback, except negroes, and now and then a fat old lady, not agile enough to mount the saddle, who went jolting over the rocky road in a carriage, envying the freedom and the graceful ease of the scores of equestrians who would pass her on their way to the places of worship. Every girl in the family, as soon as she was old enough to sit on horseback, had a horse and saddle of her own, and any other way of going to church, to a neighbor's or to town was seldom thought of.

This early practice and constant habit makes accomplished equestrians of southern ladies, and yet we can assert from personal knowledge that not one of the hundreds we knew could have been tempted to exhibit herself as a public show on a race course—to say nothing of the insult of being offered *three dollars* to do it!

Not only are the customs of our western country in many respects different from those of the South, but our roads are different, and this last more than almost anything else has probably given rise to the universal use of wagons, carriages &c. Another reason why equestrian exercise is so uncommon here is, that we have so few horses in comparison to the people to be accommodated. Farmers generally keep but one or two pairs of horses, and these, in all working seasons, are attached to the plow, the harrow or the farm wagon. When Sunday comes and the family want to go to church, the most convenient way, and indeed the only way in which all can go, is to harness the work horses to the wagon, or to the carriage, if they have one, and take all together; for even if there were few in the family, and each could be furnished with a horse, there are ten chances to one that there is not a saddle within twenty miles. A side-saddle is a bit of extravagance with which very few farmers are in the habit of indulging their daughters, never to speak of furnishing each one as she comes up to her tenth year, with horse and saddle both. At the South it is very different, as every one knows who has seen the droves of sleek horses lying in the shaded blue grass pastures, at the service of master or mistress, who need but to give the order and the choicest are put under saddle to await their pleasure. The South is, and always has been a stock raising country, which this is not; but we believe that just as fast as farmers are able to provide their daughters with good horses and saddles, just so fast will their daughters learn to love and practice equestrianism as it should be loved and practiced. And we venture to say that they will not need the demoralizing influences of a race-course excitement to make them love it. The pleasure of the exercise itself will be sufficient to incite them to its use often enough for all practical, healthful, or pleasurable purposes.

REPLY TO H. G., OF NOBLE CENTRE.—None that we know of; and furthermore, young ladies, or others writing on business, will please remember to sign their names to communications if they wish attention paid to them.

✍ We will try to find room for Libbie's enigma soon. She has written us one of the best letters we have had from our young correspondents in a long time.

✍ The enigmas intended for this number are crowded out, with other matters which were ready.

✍ Answer to Geographical Enigma in August Number — NEVER POSTPONE BUSINESS.

Answer to Enigma—The letter G. Answered by Sarah E. Brunson, Victor; and Libbie of Chelsea.

MICHIGAN FARMER.

ROBERT F. JOHNSTONE, EDITOR.

DETROIT, SEPT. 1857.**State Fairs for 1857.**

Connecticut, at Bridgeport, October 13, 14, 15, 16.
 Canada East, at Montreal, September 16, 17, 18.
 Illinois, at Peoria, September 21, 22, 23, 24.
 Indiana, at Indianapolis, October 4, 5, 6, 7, 8, 9, 10.
 Iowa, at Muscatine, October 6, 7, 8, 9.
 Kentucky, at Henderson, October 12, 13, 14, 15, 16.
 Massachusetts, at Boston, October 21, 22, 23, 24.
 Michigan, at Detroit, September 29, 30, October 1, 2, 3.
 New York, at Buffalo, October 6, 7, 8, 9.
 Ohio, at Cincinnati, September 15, 16, 17, 18.
 Pennsylvania, at Philadelphia, September 29, 30, October 1, 2.
 Wisconsin, at Janesville, September 27, 28, & Oct. 1, 2.
 United States Agricultural Society's Trial of Harvesting Machines at Syracuse, N. Y., July 13.
 U. S. Ag. Soc. Exhibition, at Louisville, Ky, Sept. 1, 2, 3, 4, 5, 6.

County Fairs.

Berrien, Niles, September 23, 24.
 Clinton, St. Johns, October 8, 9.
 Eaton County, Charlotte September 30 and October 1.
 Genesee, Flint, October 7th and 8th.
 Hillsdale, Janesville, October 13, 14.
 Ionia, Lyons, September 23, 24, 25.
 Jackson, Jackson, October 7, 8, 9.
 Lenawee, Adrian, October 7th and 8th.
 Northern Lenawee, Tecumseh, September 10th,
 Livingston, Howell, October 9, 10, 11.
 Macomb, Romeo, October 7, 8, 9.
 Oakland, Pontiac, October 7, 8, 9.
 Ottawa, Eastmanville, September 22, 23, 24.
 Shiawassee, Corunna, October 7, and 8.
 Washtenaw, Ann Arbor, October 7, 8, 9.
 Washtenaw and Wayne Union Society, Ypsilanti, Oct. 7, 8, 9.

The Wheat Crop.

During the past month we have been in the western part of Wayne county, have passed through Washtenaw from Ypsilanti to Manchester, have visited Clinton and the northern part of Hillsdale, and through the southern towns of Jackson. During these peregrinations, and which were not made at railroad speed, we have had frequent opportunities of examining the wheat crop. The yield generally is not as heavy as the growth of straw promised; up to the east line of Jackson county the ravages of the weevil were much complained of, but west of that the chief cause of failure appears to have been shrinkage from rust. Near Clinton we noticed one or two fields, which the owners considered would not pay for the reaping, so the crop was left standing. Much of the grain already thrashed averages but ten to fifteen bushels per acre, but there are many fields which have given from twenty to twenty-five bushels. The quality also varies as much as the yield, a great deal of the wheat showing a more than ordinary amount of shrunk grains, and the berry being neither as large nor plump as usual with first rate crops. So far we think the crop in eastern Michigan will be less than the average. From the western and northern counties, we have letters which invariably speak

of the wheat crop as being a good one, both in quantity and quality.

So far as heard from the crops in wheat growing states promise to be an average, and in some of them something more. The crop of Ohio is something like our own. In many of the counties, a partial failure, but in others a yield heavy enough to make up an average. Illinois and Wisconsin have good fall crops. Iowa will add to her yield of last year, having many more acres under cultivation. In New York the crop seems to be a poor one. John Johnston of Geneva writes that his crop is the worst that he has ever raised, those of 1828 and 1831 excepted.

In Great Britain the harvest is earlier by nearly two weeks than it has been for the three past years, while the latest accounts inform us that the crop besides being unusually early, is also heavy in yield and excellent in quality. The other grain crops of that country are said to be also equally excellent in quality. The editor of the London Agricultural Gazette, who had seen a large number of farmers at the Fair of the Agricultural Society of England, states that from nearly every quarter, favorable reports had been received.

The accounts from the Baltic, state that the wheat crop is good, but that the rye and spring crops did not promise so well. In France, there is promise of much better crop than has been taken off the land for the past three or four years, and prices of bread stuffs are declining in nearly all the markets of that country.

The price of the new crop has opened in Detroit at an average rate of \$1.25 per bushel, with good brands of flour at \$6.00 to \$6.50 at wholesale. The demand as yet, however, is far from active, and the supply of either coming to market is not large. Judging from the state of the markets, the likelihood of foreign demand, the unquestionable pressure of the money market, and the crops which have already been secured, we may not reasonably look for an advance on the present rates, before next spring, unless some political events should occur, of which at present there are no indications.

The Agricultural College.

The question is repeatedly asked when the Terms begin and end of the Agricultural College at Lansing, and what examination an applicant must pass.

The Collegiate year is divided into two terms—one, commencing on the first Wednesday of April, and ending on the first Wednesday in October, and the other, commencing on the last Wednesday of December, and ending on the last Wednesday in February. Applicants must pass a good examination in arithmetic, geography, reading, spelling and penmanship to entitle them to admission.

We understand that at the commencement of the winter term about forty can probably be received.

The number received will depend somewhat on the determination of those now in the Institution, the present accommodations for students being limited. A large share of those now in the College have already decided to go through the whole course of study prescribed.

In the admission of more students, preference will be given, other qualifications being sufficient, to those who present themselves from counties not now represented by students.

"We understand that the Institution attracts great interest beyond the boundaries of the State, and that the officers are constantly in receipt of letters of inquiry relative to it, from nearly every state in the Union as well as Canada.

So far as practical experimental agriculture is to be demonstrated, large results ought not to be expected this first year, as land, labor, implements and machinery, and stock have had to be organized and put in working order.

Mr. Gains Stebbins of Sparta Centre, Kent Co. sends the following:

MR. R. F. JOHNSTONE, Sir:—Being an old man, living on "borrowed time," having passed seventy years, and having obtained my support thus far through life by farming, in which I ever took great delight, and still find a great interest for the future; and observing in my Michigan Farmer for July, page 215, a request by a subscriber of the Farmer "to give him the benefit of their experience and practice in killing out Canada thistles," were it not too tedious, I would like to give the whole history of my experience on the subject in question. I know it to be an important one. I will say to your "subscriber" that if he will take any piece of land that is free from stumps, stones or any obstacle that will break the soil, or make a hiding place for the roots of the thistle, and if the land is not rich, be sure to make it rich and smooth, gardenlike, then seed with treble the amount of grass seed usual, clear the land of every thing that would in the least impede the scythe, then mow as soon as the first blossoms of the thistle begin to open, and put up for fodder; cattle will eat thistles and all. Don't leave it on the land, far not, in three years your land will be as clean as though a thistle had never been there. Mow very close to the ground, which will take away the support from the root of the thistle.

Your well wishing brother farmer.

GAINS STEBBINS.

Our friends in the interior, who intend to visit Detroit during the State Fair, will find excellent accommodations at the Howard House or at the Garrison House. Both these hotels are now managed by George Millard Esq., a landlord who is a general favorite with the travelling community, and who understands his business well and thoroughly.

WINTER BARLEY—Amongst the new varieties of seeds for crops offered this season, we call attention to the winter barley, which has been found to give an excellent yield in some of the eastern states, and the maling qualities of which are considered superior to that of the best four and six rowed spring varieties. S. T. Turner, of Ypsilanti, is selling it at \$2.50 per bushel, and any orders sent to us to have filled at that rate, will be promptly attended to. Of this barley two and two and a half bushels are considered sufficient for seed for an acre. We believe it has been tried the past year in Calhoun county, but have as yet no other experience of its merits. We shall be pleased to hear from those who have tried this kind of barley. It may possibly supply the place of winter wheat, in some localities, where the latter does not prove remunerative.

Programme of the State Fair.

The Annual Fair for 1887 will be held on the Detroit Course, on Tuesday, Wednesday, Thursday and Friday, Sept. 29th and 30th, and Oct. 1st and 2d.

Entries can be made at the OFFICE of THE MICHIGAN FARMER, 130 Jefferson avenue, Detroit, until Monday evening, Sept. 28th. The Executive Committee will meet at the Office of the Michigan Farmer, on Monday evening, the 28th.

Tuesday, First Day—Entries will be made at the entry office, on the Fair Ground, during the day, and all animals should be entered and in readiness for exhibition by 6 p. m. of the 29th.

Wednesday, Second Day—At 9 o'clock, a. m. there will be a meeting of the Executive Committee, on the Fair Ground, for the purpose of filling vacancies that may occur in the viewing committees. At 10 o'clock a. m. grand cavalcade of all the Horses on exhibition, immediately after which, all the viewing committees, except the committees on horses and cattle, will proceed to their work.

Horses—At 11 o'clock, a. m., exhibition of horses of all work on the track. At 1 o'clock, p. m., exhibition of blood horses on the track. At 3 o'clock, p. m., exhibition of trotting stallions, in trial of speed, to be tested singly and in harness.

Cattle—At 11 o'clock, a. m., examination of Class 1, *Sherburn Cattle* in the Cattle Ring. At 2 o'clock, p. m., examination of class 2, *Devon*; class 3, *Herefords*; and class 4, *Ayrshire*, in the ring.

Thursday, Third Day—Horses—At 9 o'clock a. m. grand cavalcade of all the Horses on exhibition. At half past 9 a. m., exhibition of Matched and Single Horses on the course. At 11 a. m. exhibition of Draught Horses on the course. At 3 o'clock p. m., exhibition of Trotting, Matched and Single horses, other than stallions. At 4 p. m. exhibition of Foreign Horses. All horses in trials of speed, except matched horses, will be exhibited singly and timed.

Annual Address—At 2 o'clock p. m. the annual address will be delivered by SANFORD HOWARD, of Boston, Mass.

Cattle—At 9 o'clock a. m. exhibition of class 5, cross of blood cattle; class 6, cross of Blood and Native; class 7, Native Cattle in the cattle ring. At 11 a. m. class 8, Working Cattle; class 9, steers; class 10 and 11, Fat Cattle; and class 12, Milch Cows. At 1 o'clock p. m. exhibition of foreign cattle in the ring.

Friday, Fourth Day—At 9 o'clock a. m. the reports of the Viewing Committees will be read. At 9 a. m. grand cavalcade of all the prize horses and cattle on exhibition. Prize animals and articles will be designated as follows: 1st prize a blue card, with the words "First prize" printed upon it; 2d, a red card, with the words "Second Prize;" 3d, a white card with the words "Third Prize."

Annual Meeting—The annual meeting for the choice of officers, and for the transaction of such business as may come before the meeting, will be held immediately after the reading of the reports of the viewing committees.

The several Railroad companies have agreed to take freight and passengers on the same liberal terms as those of last year. And it has been decided that all articles for entry and exhibition arriving in the city previous to noon of Tuesday, Sept. 30, shall be conveyed to the fair ground free of expense. This of course does not include live stock. Arrangements have been made with the Detroit and Windsor Ferry Company to run their boats from the Ferry Wharf, at the foot of Woodward avenue, at intervals of 20 minutes, from 8 a. m. to 6 p. m. The boats are the *Windsor, Ottawa and Union Express*, and are capable of conveying a very large number of passengers with comfort and dispatch. Fare five cents either way, no half price. Tickets can be obtained at the Ferry office or on the Fair Ground. To obviate delay, passengers are requested to procure tickets beforehand, and have them ready for delivery in passing on the boats.

J. C. HOLMES, Sec'y.

Notes and Queries.

DRAIN TILES.—The want of drain tile machines and manufacturing is much felt in parts of the country where we have been. If brickmakers were only advised of the ease with which they might add the manufacture of tiles to their works, we think several locations might be supplied. Meanwhile, we call attention to the advertisement of the Daines machine, which is simple, easily worked, and efficient, making from 200 to 300 rods per day. Mr. Daines, of Birmingham, has now on hand fifteen miles of his horse shoe tiles, which he is ready to deliver in Detroit to purchasers.

RS We have received a pamphlet containing the premium list of the Indiana State fair, which is to be held this year at Indianapolis from the 4th to the 10th October.

RS A new variety of fowls, named the *Leghorns*, are making their appearance in Massachusetts. They are said to be good layers, rather small in size, but compact in form and fine in bone and flesh. The hens are not inclined to sit, and lay well early in the season.

RS John Johnston, of Geneva, N. Y., writes to the Albany Country Gentleman, that he will use salt freely on his wheat crop this fall, either before sowing or after. This is a practice which we believe would result beneficially on most of the wheat fields in this state, and might have the effect of lessening the liability to rust, by the vigor that would be given to the straw. Salt may be applied without fear of injury at the rate of from one to four bushels to the acre, sown the same as plaster.

RS It will be noticed that Robert Sears of New York offers winter employment to canvassers and dealers in books.

RS A letter from R. C., of Hadley, is received.

RS In our notice last month of a fast mare at Kalamazoo, it was stated that she belonged to a Mr. Perry when it should have said Mr. Perry Cornell. The mistake arose from hearing her spoken of altogether as "Perry's mare."

RS Mr J. A. Baldwin wishes us to state that while at the farm of Mr Congdon, he was shown some stalks of wheat which measured seven feet one and a half inches in height. This exceeds any that we have seen.

RS Freedom Monroe, of Romeo, will exhibit his improvement on two horse harnesses at the State Fair. He has applied for a patent for his invention.

RS Messrs. Farrand and Wheaton, of Detroit, are agents for the sale of Bragg's Arctic Liniment advertised in the *Farmer*.

RS No farmer should be without the means of weighing cattle, sheep and other produce of the farm, and the Messrs. Fairbanks' scales are amongst the best articles offered for sale.

TO A "NEW SETTLER."—"Decayed logs," are as valuable for manure as logs burnt and leaving the ashes as a residue. They are an excellent manure to plow in or use in any other form, to make compost, or to mix with animal manures.

Male young cattle become oxen when they attain their fourth year. Until they are a year old, they are *calves*. From one to two years old they are *two year old steers*. From three to four years old, they are *three year old steers*. On the attainment of their fourth year, and ever after, castrated male cattle are known as oxen, and bulls of the same age are named *aged bulls*.

TALL TIMOTHY.—Mr. George P. Carman, of West Wind-

sor, Eaton county, has forwarded to us a stalk of Timothy grass which measures six feet and one inch in height, six-eighths of an inch around the stalk in the middle of the second joint, and the head was six inches in length. It grew on the farm of W. H. Barr. An acre of such Timothy would yield nearly five tons of hay.

SALE OF SHORTHORNS.—It will be seen by reference to the advertisement of M. L. Brooks, of Novi, Oakland county, that he will sell a large number of valuable young cattle, bred from some of the most celebrated shorthorns ever brought into Western New York. This sale will take place on the 23d of September, and we commend it to the attention of farmers and breeders. Mr. Brooks' health, though fast recovering from the disaster which befel him, is not good, and as he cannot give his personal supervision to his stock, he has determined to sell off. The pedigrees of a large number of those offered for sale may be found in the July number of the Michigan Farmer.

SAGINAW COUNTY STIRRING.—A reference to our Stock Register will show that Saginaw county has recently received a very valuable importation of stock. Mr. James Birney who has recently removed from Cincinnati to Bay City, Saginaw county, has brought a few thorough bred shorthorns obtained from some of the best breeders in the central part of Kentucky. The importation will be of great benefit to that part of the state where the land is so eminently adapted to grazing purposes.

Mr. Birney also brought with him a very superior yearling horse colt, sired by James B. Clay's celebrated horse, *Hambrino Chief*. This horse is kept at Ashland, and was bought in New York at the cost of \$5,000. He is considered the fastest trotter in that state. The colt is marked like his sire, and bids fair to do him great credit. An importation of this kind is what Saginaw needed, and in a short time Young Prince Hal will be appreciated.

THE PREMIUM ESSAYS.—We should have noticed last month if room had been allowed us, that the committee of the State Agricultural Society to which was given the duty of reporting on the essays submitted to them for examination, have awarded to Edward Mason, Esq., of Detroit, the first premiums for the best essay on the cultivation of wheat, and to S.B. Noble, Esq., of Port Huron, but formerly of Ann Arbor, the first premium for the best essay on potatoes and their cultivation. These essays will form part of the volume of Transactions of the State Society for the year 1856, which will shortly be published.

RS On the 10th of September, there is to be a sale of stock near Guelph, C. W., on the Grand Trunk Railroad, at which some fine lots of Southdown and Cotswold sheep are to be offered. We suggest to some of those sheep breeders who are desirous of trying a large mutton variety, that this is a good opportunity to make a purchase of Cotswolds. The cars which start from Windsor on the morning of the 15th connect with the Grand Trunk Railway, so that passengers arrive at Guelph on the afternoon of the same day.

OHIO WOOL.—The wool crop of Ohio of this year is estimated to exceed that of 1856 by nearly three millions of pounds. The amount of money supposed to be brought into that state by this production alone, is set down at six millions of dollars.

ARABIAN HORSES.—N. R. Richards of Georgetown Kentucky, has recently imported three stallions and two mares, of the best blood from Arabia. These horses have been selected after a long research among the tribes of the desert, and are to be used to cross with the best Kentucky stock.

United States Agricultural Society.

FIFTH EXHIBITION. SEPTEMBER, 1857.

The Fifth Annual Exhibition of the United States Agricultural Society, will be held on the spacious grounds of the "South Western Agricultural and Mechanical Association," at Louisville, Kentucky, on Tuesday, Wednesday, Thursday, Friday, and Saturday, September 1st, 2d, 3d, 4th, and 5th, 1857. ~~It~~ Announcements, that the Exhibition will take place in *October*, are erroneous, and should be corrected.

Encouraged by the continued success of its former exhibitions, and by the approbation of the Agricultural community, the Society has offered a list of Premiums to be awarded at Louisville, amounting, in the aggregate, to Twelve Thousand Dollars, for the various classes of Domestic Animals, Farm Products, Fruits, Flowers, Native Wines, Agricultural Implements, and Machinery. The Society's National Trial of Implements will be continued at Louisville. The awards of the Jury, on the Mowers and Reapers, held at Syracuse, N. Y., will be announced, and the machines tested will be on exhibition.

Local committees of citizens of Louisville have been appointed to act with the officers of the Society in perfecting arrangements, and Thirty Thousand Dollars have been guaranteed to meet expenses. A magnificent Floral and Fruit Hall, and a spacious Implement hall have already been erected on the grounds. This valuable co-operation and material aid, coupled with the excellence of the selected location, and the large amount of premiums offered, induces the expectation, that the exhibition of 1857 will be superior to any of its predecessors.

Favorable arrangements for the transportation of Stock, and other articles, will be made with the various railroads.

The list of Entries, the Awards of Premiums, and the Proceedings, will be published in the Journal of the Society for 1857.

The Premium List with the names of the Judges, and the Regulations of the Exhibition, will be furnished on application to Col. L. Whiteley, Assistant Secretary of the United States Agricultural Society, Louisville, Kentucky.

Exhibitors of Agricultural Implements and Machinery, can obtain any desired information by addressing Joseph E. Holmes, Superintendent, Newark, Ohio, until the 15th of August; after that date, all communications must be addressed to Louisville, Kentucky. If exhibitors delay their applications, it may be a matter of impossibility to furnish steam-power, or to make arrangements to test, in a thorough and satisfactory manner, the tardy machines.

MARSHALL P. WILDER, *President*.BEN. PERLEY POORE, *Secretary*.

LARGE POTATO CROP.—Mr. Geo. Shoecraft, who resides about three miles east of the village of White Pigeon, has now under cultivation 319 acres of Potatoes, and the yield is estimated at 70,000 bushels, or about 220 bushels per acre. If they realise him 20 cents per bushel large and small, he will get \$60 per acre to pay for land, seed, and cultivation. If they are of good quality for table use, he will likely get much more, when put in market, but cost of transportation, risk, waste, &c., has to be estimated for; and if these items leave him 30 cents per bushel large and small he ought to be well satisfied.

FARRIERY.—The Messrs. Wallington of Ann Arbor, have made us their agent for the sale of the book entitled "Every Man His Own Farrier," which we have before noted as a very valuable work on the treatment of horses. We can supply copies of it at the rate of \$2.00 per book.

Michigan Stock Register.

Shorthorns.

No. 47.—HILPA, 7th.—Roan heifer. Calved Jan. 12, 1857. Bred by A. Root of Lake county Indiana, and now the property of S. W. Palmer Norvell, Jackson Co. Mich. Sired by Omer Pasha 772 A.

Dam, Die Vernon by American Comet 2d, 211 A.

g. dam, Hilpa 5th by Fortune 11487 E.

g. g. dam, Hilpa 2d, by Duke of Wellington 55 A.

g. g. g. dam, Hilpa (imp.) by Cleveland Lad 3407 E.

g. g. g. g. dam, Hawkeye by Red Rose Bull. 2493 E.

g. g. g. g. g. dam, Hart by Rex 1875 E. Hart was bred by Mr. Richardson of Hart, Durham England, from an old and good milking tribe of Shorthorns.

Hilpa 7th is a very promising heifer, and we think will be a cow superior to her dam in some points.

Omer Pasha is a bull out of Yorkshire Countess, imported by George Vail of Troy, N. Y., by Kirkleavington 2d, 610½ A.

Mr. Palmer has some young stock to sell. He is making preparations to raise first class animals, and his efforts must prove of great service to the farming community by which he is surrounded. He recently purchased White Jacket 2d, from the Messrs. Sly of Plymouth, her pedigree is entered on page 594 vol. 8 of Am. Herdbook. He also owns Die Vernon, whose pedigree is on page 152, vol. 2, of A. H. B.

No. 48.—KENTUCKY.—Bull, red and white. Bred by Col. Wm. Thompson of Mercer Co. Ky., owned by James Birney, Bay City, Saginaw Co., Mich. Calved July 1st, 1856. Sire, Robin 913 A. Dam, Daphne, got by Mercer 701 A, out of Evelina, by Charles Colling 333 A.

g. dam, Belina 2d by Malcolm 1190 E.

g. g. dam, Belina by Barmpton 54 E, by Wellington 680 E, by Laird 15 E.

Robin was bred by H. Clay, Jr., of Lexington, Ky., and was sired by Belmont 242, out of imported Lady Elizabeth by Emperor 1974.

No. 49.—PASTORA, 3d.—Cow. Roan. Bred by Major F. P. Kinkaid Mercer county, Ky. Owned by James Birney, Bay City, Saginaw county, Mich. Calved Oct. 5, 1855. Sire, Prince Hal 867 A. Dam, Snowdrop 2d by Ben Gratz 252 A.

g. dam, Snowdrop 1st by Charles Colling 333 A.

g. g. dam, Pastora 1st by Young Emperor 474 A.

g. g. g. dam, Virginia by imported Miranda 448 E.

g. g. g. g. dam, One Teat by Miranda 4488 E.

g. g. g. g. g. dam, old imported Treswater cow.

Snow drop 2d is registered at 460 of the Am. Herdbook, 2 vol.

No. 50.—SIR DON.—Bull, red and white. Owned by Lewis Potts of Clinton, Mich. Bred by S. W. Palmer of Norvell Mich. Calved Oct. 15, 1854. Sire, Dallimore 400 A. Dam, Miss Kerr, by Milo 711 A, p 481, vol. 2 A. ti. B.

g. dam, Ruby, by Spice.

g. g. dam, Pomona, by Fitz Roslyn, 4846 E.

g. g. g. dam, Clarinda, by Buckingham 1755 E.

g. g. g. g. dam, Clara, by Elector, 1961 E.

Milo was imported by James Bagg of Kentucky, and was bred by W. T. Payley of England. His grandsire was Fitz Roslyn above named.

Sir Don is a square made bull, with a good development of chest and brisket. He is not of the largest size, and is not quite as fine in bone as we would desire. He is also a little heavy in the head, but he has a good back, shoulder and loin.

No. 51.--RED JACKET.--Red. Bred by M. L. Brooks, of Novi, Michigan. Calved Feb. 22d 1856. Got by Yonondio (38 of Mich. Stock Reg., 1116, A. H. Book) out of Mayflower (41 Mich. Stock Reg., A. H. Book, page 474),--got by Rocket 920 A. out of Lady Weddle by Old Splendor 767 A.

g. dam, Moss Rose, by American Comet, 9 A.

g. g. dam, Rose, bred by Mr. Weddle, of Rochester, N. Y., from one of his imported cows bred by Major Bower, of Yorkshire, Eng.

No. 52.--LADY NOWLEN.--Red and White. Calved June, 1851. Got by Nowlen's Splendor, out of Mary Nowlen, by Remson 154 A.--Nelly by imported Windle 135 A. Nowlen's Splendor was by Old Splendor 767 A.

The Markets and the Crops

The wool sales for this state are nearly all made and almost the whole clip of Michigan has passed into the hands of the wool dealers. The clip this season has been large and has reached close on to three millions of pounds, at least it is generally estimated as high as that amount. The average rate has probably been from 38 to 40 cents. It will be remembered by our readers, that we cautioned them not to be deceived into selling their wool at low rates, but to hold on when they could, rather than sacrifice their clips. We are pleased to learn that this advice was not lost, and it is gratifying to observe that some of the eastern papers are beginning to bear us out in the opinions we held two or three months ago, in stating that there was likely to be a greater demand than supply, from the fact that the increase of production, was to equal to the increase of consumption. The New York Tribune in a late issue says:

"Since the discovery of gold in California and Australia the attention of the humanum has been somewhat diverted from wool raising, and the result is that, notwithstanding the increased want of woolen producers, the supply of the raw material has not perceptibly increased, but rather diminished, while prices in the different markets at home and abroad keep advancing. Prices of certain products have ruled so high, too during the Eastern war as to make our farmers indignant to wool raising, and now that a reaction is anticipated in this respect by increased production, it may not be amiss to devote greater attention to the growing of wool."

Nothing like this appeared in any of our papers previous to the wool clip; but there were numerous speculations both by editors and correspondents on the disastrous effect the new tariff, on the present state of manufactures, and on the inability of our farmers to pay higher rates than those of last year. But higher rates were only fancied by our farmers, and these high rates, were in great measure owing to the full bold front assumed by the wool growers. A few were secured, and got rid of their clips at reduced prices, but as a general rule the farmers of Michigan got fair prices. At the present date, rates are higher at the east than they have been this season, although the whole of the clip is pressing onward to market. This does not look discouraging. While in the country last month, we heard the course of the *Michigan Farmer* sustained on all sides, and in many instances we were pleased to learn that it had been the means of saving considerable sums to some of its patrons. We hope next season to be able to organize a system of reports which will reach our patrons weekly during the time of wool selling.

Flour during the month has been down as low as \$5.50 per barrel and wheat ranges from \$1.15 to .25. The demand as yet is light, but appears to be getting better, but without improvement in prices. Freight is moderate as yet. Barley is purchased at \$1.50 to \$1.75 per 100 lbs. The beef market is very firm and prices of cattle sheep and hogs appear to be running upwards gradually, the supply at the east not being as full as was expected. Farmers who have stock should not be in any hurry to part with it at present if they have feed enough to keep them gaining in weight.

BREADSTUFFS AND GRAIN.

Flour, bbl.	\$5.75 a 6.00	Clover per bush.	\$7.50 a 8.00
Cornmeal, 100 lbs.	1.87 1/2 a 2.00	Timothy.	3.50 a 4.00
Buckwheat, 100 lbs.	1.50 a 1.75	Red top.	1.75 a 2.00
Wheat, bush.	1.15 a 1.25	Blue grass.	3.00 a 3.50
Corn, bush.	0.72 a 0.75	Richard grass.	3.00 a 3.50
Oats, bush.	0.40 a 0.44	Sandusky plaster, buh.	1.5 a 1.6
Barley, per 100 lbs.	1.50 a 1.60	Grand River.	1.50 a 1.60

BEEF, MUTTON, &c.

Beef on foot.	\$4.00 a 6.00	N Y Plaster.	1.13 a 1.31
Beef dressed.	7.50 a 8.50	Sandusky water lime.	1.51 a 1.59
Sheep, dressed per lb.	0.05 a .006	N Y do.	1.31 a 1.51
Sheep on foot.	4.50 a 6.00	Salt fine bbl.	1.75 a 2.00
Hogs at lb 12 1/2, per 100.	8.50 a 9.00	do coarse.	2.25 a 2.50
Turkeys.	1.00 a 1.50		
Chickens, pair.	.37 1/2 a .50		
Geese.	.37 1/2 a .50		
Eggs per doz.	17 a 20		
Butter, per lb fresh.	22 a 24		
do firkin.	14 a 17		
Cheese per lb.	9 a 11		

SEEDS, PLASTER, SALT, &c.

Apple per bush.	1.00 a 1.25
White flax, half bbl.	3.50 a 5.50
White beans per bush.	2.00 a 2.50
Sheep pelts.	9.00 a 12.00
Clay, timothy, ton.	10.00 a 12.00
Common.	12.00 a 14.00
Honey.	20 a 25
Potatoes.	1.00 a 2.00

Every reader of the *Michigan Farmer* will please notice the advertisement descriptive of Mr. Sears' Pictorial Family Bible, and send for the Printed catalogues of our Illustrated Works. It is uninitiated in the great art of selling Books, we would say, that we present a scheme for money making, far better than all the gold mines of California and Australia. Any person wishing to embark in the enterprise, will risk little by sending to the Publisher \$25, for which he will receive sample copies of the various works, (at wholesale price,) carefully boxed, insured, and directed, affording a very liberal percentage to the agent for his trouble. With these he will soon be able to ascertain the most saleable, and order accordingly.

ROBERT SEARS.

DEVONS FOR SALE.

A FEW thoroughbred bulls and heifers, bred from my own herd by my improved bull, Duke of Devon.

Also, E sex hogs. A. Ely, Elyria, O.

PUBLIC SALE

Improved Shorthorns.

I WILL sell at Public Sale, on Wednesday the 23d day of September next, at my residence, in the town of Novi, Oakland county, two miles east of Northville, a choice lot of Shorthorn, consisting of Bulls, Cows and calves, bred expressly with the view of combining the good milking and feeding qualities of the Durham breed. Pedigrees and stories given on day of sale. Terms easy and made known on day of sale. Sale to commence at 11 o'clock A. M.

M. L. BROOKS.

MATRIMONIAL.

A BACHELOR, of not many years, having become weary of superintending affairs on a somewhat extensive farm, both out of doors and in the house, and also of everything connected with single blessedness, desires to say to the lady readers of the Farmer, that he is of good character, healthy, intelligent, enterprising, amiable, and moderately good-looking, enjoys tea, coffee, tobacco, and spirituous liquors, and now desires to be united with and sold to a lady of like qualifications and habits; competent to superintend the "Household." Any lady who may wish to communicate with him, may address letters to FRANK HONESTIE, enclosed in one addressed to the editor of Michigan Farmer, containing real name and address.

Detroit, August 1, 1857.

2c

The Best Book for Agents.

EMPLOYMENT FOR FALL AND WINTER. To Persons out of Employment.

An Elegant Gift for a Father to Present to his Family! Send for one Copy, and try it among your Friends! We are Agents in every section of the United States and Canada, to circulate SEARS' LARGE TYPE QUARTO BIBLE, for Family Use--Baltimore

The People's Pictorial Domestic Bible,

With about One Thousand Engravings!!

This useful book is destined, if we can form an opinion from the Notices of the Press, to have an unprecedented circulation in every section of our wide-spread country, and to form a distinct era in the sale of our works. It will, no doubt, in a few years become the FAMILY BIBLE of the whole ANTI-SLAVE.

The most liberal remuneration will be allowed to all persons who may be pleased to procure subscribers to the above. From 10 to 100 may be easily be circulated and sold in each of the principal cities and towns of the Union. IT WILL BE SOLD BY SUBSCRIPTION ONLY.

Application should be made at once, as the field will soon be occupied.

Persons wishing to act as agents and do a safe business, can send for a specimen copy. On receipt of the specimen price, Six Dollars, the PICTORIAL FAMILY BIBLE, with a well bound subscription. Book, will be carefully boxed, and forwarded per express, at our risk and expense, to any central town or village in the United States, excepting those of California, Oregon and Texas.

Register your Letters, and your money will come safe.

In addition to the Pictorial Bible, we publish a large number of Illustrated Family Works, very popular, and of such a moral and unexceptionable character, that while good men may safely engage in their circulation, they will confer a PUBLIC BENEFIT, and receive a FAIR COMPENSATION for their labor.

Orders respectfully solicited. For further particulars, address the subscriber, (post paid.)

ROBERT SEARS,

181 William Street, New York.

1857. FARMER'S WAREHOUSE. 1857

BURNHAMS & BUREALL,

Dealers in all kinds of Agricultural Implements, Garden and Field Seeds, Salt, Plaster and Water Lime. Warehouse near Railroad Depot, BATTLE CREEK, MICH. [Oct-12]

DROOM CORN SEED. King Phillip, Flower, Early Dutton and other varieties of SEED CORN, at PENFIELDS', 103 Woodward avenue.

SYRACUSE NURSERIES.

OUR STOCK for the Fall Trade of 1857 will consist of

All the Larger and Minor Fruits, in unprecedented numbers.

Ornamental Trees, in great variety, including many of the finest native Forest Trees.

The Hardy Evergreens, Norway and American Spruce, Scotch Pine, Hemlock, Balsam Fir, and Arbor Vitae, ranging from 3 to 6 feet high.

Roses, Shrubs, Dahlias, Fæonies, Phloxes, of rare beauty, and in great abundance.

Hedge Plants, of Buckthorn, Privet, Osage Orange, and Honey Locust.

Asparagus and Rhubarb, best kinds and strong roots; and of

Bulbous Roots, the usual annual importation.

Raspberries and Currants, our assortment is especially large and attractive, and embraces all the old and new sorts of worth and repute. So also

GOOSEBERRIES, GRAPES, & STRAWBERRIES, may be found with us in great variety and numbers.

The cultivation of the smaller fruits has always been a specialty with us. For descriptions and prices of our articles, we beg to refer to the new editions of our catalogues, now in the hands of the printer, and soon to appear, viz:

No. 2. A descriptive Catalogue of Fruits:

No. 3. A descriptive Catalogue of Ornamental Trees, Shrubs, Roses, &c.;

No. 4. A descriptive Catalogue of Dahlias, Greenhouse and Bedding Plants, &c.;

No. 5. A wholesale Catalogue for Nurserymen and Dealers.

Forwarded on receipt of a one cent stamp for each.

The urgency of the season's demand upon us for Fruit Trees, &c., having compelled us to add largely to the means of supply afforded by our own nurseries, we have recently purchased of Mr. Thos. Wrigut the entire property known as the Newark Nursery, and have associated with us in its ownership and management Mr. Richard White, one of its former proprietors, as resident partner, by whom the business will be continued as usual in the name of R. White & Co. By this arrangement our facilities for answering demands upon us are rendered abundant and complete; enabling us to sell as largely, at prices as low, on terms as inviting, and of productions as varied and excellent, as can be afforded by any other nursery establishment.

THORP, SMITH & HANCHETT,

Syracuse, N. Y., August 16, 1857.

Sep. 2t

TOLEDO NURSERY ASSOCIATION.

THIS establishment so advantageously located for Western Nurserymen, amateurs and purchasers generally, where they can get their trees fresh from the ground, and save besides a heavy cost for transportation, is now prepared to supply a general assortment of their products, as follows:

*Standard and Dwarf Apples,
Standard and Dwarf Pears,
Standard and Dwarf Cherries,
Peaches, Apricots, Nectarines, Plums,
Grapevines, Currants, Raspberries,
Strawberries, Lawton Blackberries,
EVERGREENS, ORNAMENTAL TREES,
SHRUBBERY, &c.*

All the above have been grown under the immediate care and supervision of A. Fahnestock, late of the Syracuse Nurseries, with every care and attention, and will compare favorably with any stock in the United States, and are now offered on the most advantageous terms, and at the very lowest rates.

Our New Wholesale Catalogue

For the fall of 1857 and spring of 1858, is now ready for distribution, and will be forwarded to all applicants, who enclose one cent stamp to prepay the postage thereon.

For the Association,

Sep 2t

A. FAHNESTOCK.

GENEVA NURSERY.

W. T. & E. SMITH, Proprietors.

THIS excellent nursery is located at Geneva, N. Y., and occupies over one hundred acres. It contains a full assortment of every variety of

FRUIT & ORNAMENTAL TREES.

Standard and Dwarf Trees, Roots, Bulbs, Flowers and Shrubs,

That are worth growing. Full particulars are to be found in their Catalogue, which will be sent by mail, or on application to their agent, of whom may also be had a choice variety of Garden seeds.

JOHN S. CAMPBELL, Agt.

Aug. 1, 1857.

2t

Mount Clemens, Mich.

HICKOK'S PORTABLE CIDER MILL AND PRESS.

A FULL Stock for sale by the subscribers.

Also Grain Drills, several patterns.

Field Rollers of Cast Iron in sections.

Portable Horse Powers and Turbines, (Emery's Patent).

With full assortments of Implements and Seeds of all kinds.

Sep. 1t

H. D. EMERY & Co.
204 Lake street, Chicago.

IMPROVED SHORTHORNS.

THE undersigned invites the attention of residents in Michigan and the neighboring states desirous of procuring Shorthorn Stock for breeding purposes, to his herd room which he proposes to sell a few animals, both male and female. He feels confident that for valuable practical qualities, as well as for purity of pedigree, they are worthy of consideration.

Col water, Mich., Aug. 24, 1857.

3t J. B. CRIPPEN.

HICKOK'S CIDER MILL.

THE Machine for 1857 has all the cylinders of iron with improved teeth. Balance wheel much enlarged, with two bearings. The screw 2 inch working through iron beam, and 4 inch nut. The whole machine screwed together with iron bolts. It cannot be equaled.

Price \$15.

Sep 4t

D. O. & W. S. PENFIELD.

APPLE PARERS of all varieties, by the dozen.

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D. O. & W. S. PENFIELD.

THE AMERICAN FARMER'S

ENCYCLOPEDIA;

Embracing all the recent discoveries in Agricultural Chemistry, and the use of Mineral, Vegetable and Animal Manures.

With Descriptions and Figures of American Insects injurious to Vegetation.

Being a complete Guide for the cultivation of every variety of Garden and Field Crops. Illustrated by numerous engravings of Grasses, Grains, Animals, Implements, Insects, &c.

By GOUVERNEUR EMERSON, of Pennsylvania.

upon the basis of Johnson's Farmer's Encyclopedia.

Price Four dollars. Sent free of postage upon receipt of price.

"No Farmer should be without it." Published by

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C. M. SAXTON & Co.,

Agricultural Book Publishers, 140 Fulton st, New York.

IMPROVED STOCK viz: Durham Cattle, Jacks, Jennets and Mules, South Down Sheep, and Chester White Pigs, constantly on hand and for sale.

Hardford, Trumbull Co., Ohio, March 19, 1857.

SETH A. BUSHBELL.

BULBOUS ROOTS, ROSES, STRAWBERRIES, TREES, &c.

W. R. PRINCE & CO. FLUSHING, N. Y., offer their most extensive Collection of Bulbous Flower Roots in their piece Catalogue for 1857. The new descriptive Catalogue of the finest Strawberries, 105 varieties, and new Catalogue of Roses, Tree and Herbaceous Pæonies, Carnations, Pinks, Iris, Cypripediums, Dahlias, &c., and a Descriptive Catalogue of Fruit and Ornamental Trees, are ready for applicants who enclose stamps.

Chinese Potato Tubers will now be contracted for, deliverable 1st of October, with a treatise on culture.

10,000 Linseed, Victoria, and Early Tobolsk Rhubarb.

50,000 German Asparagus.

250,000 American Thorn, Arbor Vitae, Osage Orange, Honey Locust, and Privet for Hedges.

10,000 Cherry and Provence Currants.

50,000 Lawton and Imperial Blackberries.

30,000 Orange, Antwerp and other Raspberries.

2,000 Hardy Grapes.

English and Houghton Gooseberries, and Cranberries in any quantity.

All in quantities at the lowest rates.

N. B. The collection in every department is unrivalled, and many of the varieties of Fruit Trees, Strawberries, &c., cultivated elsewhere, have been rejected as worthless.

sept

SELF ADJUSTING R. R. DOOR HANGERS.

For Depots, Burns and Outbuildings,

ON receipt of \$2.00 I will send the above article, with Iron rail for an eight foot door; and \$3 for a 12 foot door. Warranted to give full satisfaction. Full directions for putting up accompany each set.

sept 2t

A. W. MORSE, Eaton,

Madison co., N. Y.

800

PLOWS of all makes. Starbuck, Eagle, Steel and sub soil, Cultivators and Seed Drills. D. O. & W. S. PENFIELD, Agricultural Warehouse, Detroit.

Genesee Valley Nurseries-

Fruit Trees, Ornamental Trees, Shrubs, Roses, &c., &c., &c.

THE PROPRIETORS of the well known Nurseries have on hand a large and well grown stock of

Fruit Trees, Ornamental Trees, Shrubs, Roses, Greenhouse Plants, Bedding Plants, Dahlias, Phloxes, and other Hardy Border Plants.

The assortment of **ROSES** is very extensive, and embraces all varieties which could be obtained, and which are considered worthy of cultivation. Our Collection of **HYBRID PERFECTIONALS** is the most complete in the country.

The Greenhouse Department

Receives particular attention, and the stock of Fuchsias, Geraniums, and other Greenhouse Plants, is large and varied.

THE FRUIT DEPARTMENT

Consists of

Apples, of the leading varieties, Dwarf and Standard.
Pears, of all desirable varieties, on Quince and Pear stocks.
Plums—A nice selection of well grown trees of popular sorts.
Cherries—All the popular sorts, Dwarf and Standard.
Peaches—A choice assortment.

Small Fruits—**Blackberries**, **Gooseberries**, **Blackberries**, and **strawberries** of all new and approved varieties.

We have, for the accommodation of **NURSERYMEN, Stocks and Seedlings**, including **Apple, Pear, Plum, Cherry, Quince, &c.**, also **Seedlings of Evergreen Trees**, including **Boxwood, Spruce, Balsam Fir, Scotch Pine, Austrian Pine, Larch and Spruce** Plants.

ORNAMENTAL DEPARTMENT.

The stock of Ornamental Trees and Shrubs, both Deciduous and Evergreen, will be found to embrace all that is desirable among **LAWNS, STAMENS, TREES, and SHRUBS**, consisting of **Hydrangea** for a summer roses; **Mass. Bourne**, **Tea**, **Bengal**, or **China**, and **Camellia** or **Paul** roses.

Flowers—**ROSES**, or **double** **ROSES** and **BULBOUS FLOWERS**, as **exquisite** as **ornament**.
All the above will be disposed of at low rates, and on advantageous terms. For further details we refer to our full set of Catalogues, which will be mailed to applicants who enclose a one cent stamp for each.

No. 1. Descriptive Catalogue of Fruits, &c.
No. 2. do do Ornamental Trees, Roses, Shrubs
No. 3. do do Greenhouse and Bedding Plants,
Dahlias, &c.

No. 4. Wholesale or Trade List for Nurserymen and Dealers.
Amateurs and others interested in horticulture, are respectfully invited to visit our Show Grounds and Greenhouses at 153 South Second street, a short distance from the Central part of the City.

All communications to be addressed to **A. FROST & Co.**
Genesee Valley Nurseries, Rochester, N. Y.
Rochester, N. Y., August, 1857.

A New Work for sale!

SORGHO & IMPHEE.

THE CHINESE & AFRICAN SUGARCANE.

A COMPLETE TREATISE UPON

THEIR Origin, Varieties, Culture and Uses; their value as a Food Crop, and directions for making Sugar, Molasses, Alcohol, Branding and still Wines, Beer, Cider, Vinegar, Paper, Starch and other articles.

Fully illustrated with Drawings of approved Machinery.

With an appendix by Leonard Wray of California, and a description of the various processes of establishing the juice of the Imphee, with the latest American experiments, including those of 1857 in the South.

By HENRY S. OLCOCK.

To which are added translations of valuable French Pamphlets received from the Hon. John Y. Mason, American Minister at Paris, Price One Dollar, Sent by mail postpaid. Orders taken immediately. Those not received will be mailed.

C. M. SEXTON & Co.

21 Agricultural Book-Publishers, 149 Fulton-street, N. Y.

HORSE POWERS, THRESHERS AND CLEANSERS.

PISTONS and 10 horse, Emeys' and 2 Horse (tread) Powers
Pease's Emeys' Powers, Corn and Cob Mills, Iron Mills and
Feed Mills, Flour Mills, Cross-cut and Circular Saw Mills, Leonard
Smith's Shunt Machines.
D. O. & W. S. FENFIELD,
157 6th St.
No. 103 Woodward Avenue, Detroit.

THE GREAT ENGLISH REMEDY.

SIR JAMES CLARKE'S

CELEBRATED FEMALE PILLS!

Prepared from a Prescription of Sir John Clarke,
M. D. Physician Extraordinary to the Queen.

THIS invaluable medicine is unfailing in the cure of all those painful and dangerous disorders incident to the female constitution. It moderates all excess, and removes all obstructions, and a speedy cure may be relied on.

TO MARRIED LADIES

It is peculiarly suited. It will in a short time bring on the monthly period with regularity.

Each bottle price One Dollar, bears the Government Stamp of Great Britain, to prevent counterfeits.

CAUTION.

These Pills should not be taken by females that are pregnant, during the first three months, as they are sure to bring on miscarriage; but as every other time and in every other case, they are perfectly safe.

In all cases of Nervous and Spinal Affections, Pains in the back and limbs, Headaches, Fatigue on Slight Exertion, Palpitation of the Heart, Loss of Sleep, Hysterics, Sick Headache, Whites, and all the painful disorders occasioned by a disordered system, these Pills will effect a cure when all other means have failed, and although a powerful remedy, do not contain iron, calomel, and opium, or any thing hurtful to the constitution.

Full directions accompany each package.

Sole Agents for the United States and Canada,

JOB MOSES,
(Late I. C. Baldwin & Co.)

Rochester, N. Y.

N. Y.—\$1.00 and 6 postage stamps enclosed to and any authorized Agent, will ensure a bottle of the Pills by return mail.

For sale in New York by J. S. CUTHBERT & CO., PARKMAN & WHEATON, T. & J. INGHAM, GEORGE B. DICKINSON & CO., E. C. TERRY, and in every Drug Store in every town in the United States.
April 1st, 1857.

DOCTOR HOOFLAND'S GERMAN BITTERS,

PREPARED BY

Dr. C. M. JACKSON, Philad'a, Pa.

WILL PERFECTLY CURE

LIVER COMPLAINT, DYSENTERIA, JAUNDICE,
Chronic or Nervous Debility, Diseases of the Kidneys, and all diseases arising from a disordered Liver or Stomach.

Such as Constipation, Inward piles, Fullness or Blood to the Head, Acidity of the Stomach, Nausea, Heartburn, Disgust for Food, Fullness or weight in the stomach, Sour Fructations, Sinking or Fluttering at the pit of the Stomach, Swimming of the Head, Harried and difficult Breathing, Fluttering at the Heart, Choking or suffocating sensations when in a lying posture, Dimness of Vision, Dots of webs before the Sight, Fever and pain in the Head, Debility of Perspiration, Yellowness of the Skin, and Eyes, Pain in the Side, Back, Chest, Limbs, &c. Sudden Flushes of Heat, Burning in the Flesh, Constant Imaginings of Evil and Depression of Spirit.

The proprietor is calling the attention of the public to this preparation, does so with a feeling of the utmost confidence in its virtues and adaptation to the disease for which it is recommended.

It is no new and untried article, but one that has stood the test for ten years' trial before the American people, and its reputation and sale is unrivalled by any similar preparations extant. The testimony to its superiority is the most prominent and well known physicians and individuals in all parts of the country is numerous and a careful perusal of the Almanac, published annually by the proprietor, and to be had gratis from his Agents, cannot but satisfy the most skeptical that this remedy is really deserving the great celebrity it has obtained. Principal Office and Manufactory. No. 16 Arch St., Philadelphia, Pa.

GREAT CURE OF PILES.

CAMDEN, N. J., March 12, 1855.

DEAR SIR—It is with much pleasure I take this opportunity of informing you of the great benefit I have derived from the use of a few bottles of "Hoofland's German Bitters." For a number of years I have been sorely and severely afflicted with pain in the stomach, attended by attacks of the Piles, for which I tried a great many remedies, but without effect. I was at length advised to use the German Bitters, I did so, using in connection for the Piles, your *Spikenard Ointment*, and I now inform you that they have entirely cured me and resorted me to health, and I would advise all the afflicted to use your valuable medicines, &c.

Respectfully yours, MARGARET REFSHER.

Dr. C. M. Jackson, Philadelphia.
No. 46 First Street, Camden, N. J.
For sale by druggists and storekeepers in every town and village in the U. S. and Canada.
Dec. 1855.—1 year.

FIRST CLASS FAMILY JOURNALS.

Life Illustrated: A first class pictorial paper, weekly, \$2 a year; \$1 for a half year.

Water Cure Journal: Devoted to the laws of life and health. \$1 a year.

Phrenological Journal: Devoted to the improvement mankind. \$1 a year.

The Three Journals sent one year for \$3. Address
aug24 **HOWLER & WALLS,**
No. 308 Broadway N. Y.

BIRMINGHAM NOVELTY IRON WORKS, G. SMITH, Proprietor.

THESE Works are manufacturing and keep on hand the following articles for sale

A. Smith & Son's Improved Crosscut Sawing Machine,

For sawing wood, shingle bolts, &c. from the logs. These machines are the cheapest and by far the best in use. Price \$15.

Two and Four Horse Powers,

Single gear, from \$45 to \$60. Double gear from \$60 to \$78. These Powers took the premium at the State Fair in Detroit last fall. They work on the lever principle.

Thrashing Machines,

Without separator, Price \$45; with A. Smith's Revolving Rake, separator and cleaner, with straw carrier, price \$170. These separators are decidedly the best ever yet introduced. They save all the grain, and work with less power than any other machine. The above price will pay for a four horse machine, the same for two horse machine; they are of the same size. These machines with double geared powers, price from \$240 to \$250 all complete.

Cider Mill and Corn Sheller combined, \$33.

Cast Iron Field Rollers, \$38 to \$45.

Circular Saws for sawing wood, \$40.

Plows of all descriptions, and various prices.

All kinds of castings and finishing done to order on short notice.

Terms cash, and prices low.

Address
G. SMITH, Birmingham, Mich.

ATTENTION FARMERS!!

ALL those who want a good article of Cloth or Flannel manufactured for their own use, will do well to take their

WOOL

- TO -

CORNWELL'S FACTORY, Ann Arbor, Mich.

We have been adding New Machinery to our establishment, and with our long experience in the business, we feel confident that we can give entire satisfaction.

OUR PRICES ARE:

One half of the cloth we can make from the wool; or

We manufacture wool as follows:

For Casimeres,	3s per yard.
White Flannel, 2 yard wide,	3s per yard.
Do. do. 1 and w do.	1s. 6d. "
Madder red Flannel, fast colors,	30d. "
Wine and Pres ed Flannel,	2s. "

Wool sent by railroad will be promptly attended to. All work warranted well done, and ready when promised, or all damages paid prompt.

A large Stock of Cloths and Flannels on hand,
To exchange for Wool on reasonable terms.

CORNWELL & BROTHER.

Ann Arbor, May, 1857.

June 6th

TO PERSONS OUT OF EMPLOYMENT.

WANTED—In every county in the United States, active, industrious and enterprising men, as Agents for the sale, by subscription, of valuable and interesting books; all of them being expressly adapted to the wants of every family, and containing nothing of a pernicious or injudicious tendency. Our publications are among the best in the country, and good agents can realize a profit of from \$2 to \$5 per day, by engaging in the business. A small capital of only \$20 to \$50 is required. For further particulars, address
July 31. **ROBERT SEARS, Publisher.**
No. 181 William Street, New York.

THOROUGH DRAINING!!

Is the foundation of all improvement in farming!

THE CHEAPEST AND BEST

TILE MACHINE

in the world!

DAINES'**AMERICAN DRAIN TILE MAKER**

HAS BEEN AWARDED FIFTEEN FIRST PREMIUMS, at State and County Fairs.

THE TILE MACHINE invented and patented by JOHN DAINES of Birmingham, Oakland County, Michigan, is now being manufactured in the most thorough manner, and is offered to the farming community as the

cheapest, most labor-saving, and most complete

invention, and enabling farmers to make their own tiles, that has yet been put before the Agriculturists of the United States.

These machines are made of iron, are easily worked, any man being able to manufacture a first rate article after a few hours practice. They cost, delivered in Detroit only \$110. They have two discs for three and four inch tile; and extra discs, to accompany the machine cost \$3.00 each. These machines will manufacture per day according to the force employed, from

150 to 250 rods of horseshoe or pipe tile.

The machine weighs but 600 pounds, and can be packed and sent to any part of the United States, or to foreign countries, as easily as a piano.

With this machine any farmer who has a fair quality of clay on his farm, can manufacture his own tiles at a cheap rate, and easily save the price of the machine by avoiding the cost of transportation. The machine when in operation, takes up no more room than an ordinary sized kitchen table; it may be worked by two or three men as may be found most convenient and economical, or a man and two boys can keep it in full operation.

For simplicity, durability, economy, cheapness, and amount of work, this Tile Maker challenges the world!

At the present time when thorough draining has become a necessity on alluvial lands, it offers the simplest and cheapest means of furnishing farmers with a draining material far superior to any other material now used for that purpose.

Applications for these machines may be addressed to

JOHN DAINES,

Birmingham, Mich.

or to **R. F. JOHNSTONE,**

130 Jefferson Avenue, Detroit.

LOCKPORT NURSERIES. LOCKPORT, N. Y.

THE SUBSCRIBERS would call the attention of the Public to their extensive stock of

FRUIT & ORNAMENTAL TREES, SHRUBS,**ROSES, &c.**

For the Fall Trade.

Consisting of

Dwarf and Standard Apple, Pear and Cherry Trees, of all the popular sorts.

Peach, Plum, Apricot and Nectarine Trees, the same.

Quince, Gooseberry, and Currant Bushes, the same.

Raspberries, Strawberries, Grape Vines, Rhubarb, and Asparagus Roots.

Blackberries of the following varieties, New Rochelle or Lawton, Dorchester or Highbush, and Newman's Thornless. Ornamental Trees and Shrubs, Roses, Dahlias, Bulbs, Phloxes, Greenhouse, Herbaceous and Bedding Plants in great variety.

Evergreens, a large stock of all the hardy varieties.

100,000 Quince Stocks, Angers & Pontenay, of our own raising.

200,000 Apple Stocks.

100,000 Apple Grafts can be furnished during the coming winter and spring, properly packed, at \$8.00 per 1000.

Catalogues sent to all applicants on receipt of a cent postage stamp to prepay the postage.

Orders amounting to \$15, accompanied with the cash or a satisfactory reference, will be delivered free of charge for transportation and at our risk, at any depot on the line of the Michigan Southern, Michigan Central, Great Western and Lake Shore Railroads.

PENFIELD, BURRALL & Co.

Lockport, July, 1857.

aug 2m

Proprietors.

STEEL CULTIVATOR TEETH.

THE subscriber having purchased the exclusive right of manufacturing and vending **D. B. ROGERS' Improved Steel Cultivator Teeth**, throughout the north half of the State of Indiana and all the State of Michigan, except the counties of Oakland, Lapeer, Genesee, Calhoun, Kalamazoo, and Hillsdale, now offers to supply his district with said Teeth, made of the best quality of spring steel, and in the latest improved shape.

These Teeth are too well known to need any certificates of their usefulness. They have taken the first premium at every State and County Fair wherever exhibited.

For sale in every principal city and village throughout the above named district.

The subscriber has also purchased the exclusive right of manufacturing and vending **D. B. ROGERS' IMPROVEMENT IN THE WHEEL CULTIVATOR**, throughout most of the States of Michigan and Indiana. At the Michigan State Fairs in 1853 and 1854, he exhibited one of these Machines, fitted with steel teeth, and received the first premium and a diploma. This Machine, fitted with Rogers' improved steel teeth, is considered by all farmers who have used them, to be the best Wheel Cultivator in use, not only for preparing summer fallows and putting in grain, but for the cultivation of corn when planted in drills.

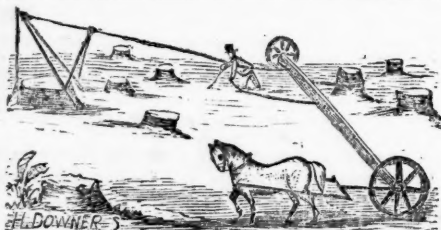
No farmer will dispense with the use of the above named farming implements who has any knowledge of their usefulness.

All orders for Wheel Cultivators, or Cultivator Teeth, filled on short notice.

CAUTION.—All persons are prohibited the use of these Teeth and Machines, in said district, unless purchased of the subscriber or his duly authorized Agents. Address,

T. A. FLOWER,
PONTIAC, MICH.

April 1, 1856.

**WILLIS'S STUMP EXTRACTOR.**

THIS powerful implement has during the present spring pulled out

*Twenty-three Stumps in one hour and fifteen minutes,
125 stumps in eight hours !!!*

This machine not only pulls out the stumps, but clears the land of them, and fits it for the plow as soon as the standing timber is cut down.

For the right to use or manufacture these machines in all the territory of the State of Michigan unsold by D. Blackmar, the owner of the patent for Michigan, apply to

DAVID BLACKMAR, Ypsilanti,
or to **R. F. JOHNSTONE,** Office of the Michigan Farmer,

**SPLENDID FARM
FOR SALE or TO RENT!
NEAR MACKINAC.**

THE subscriber hereby offers for sale or to rent his farm consisting of 714 acres, situated about 12 miles from Mackinaw. Three hundred acres of this land is prairie or meadow, growing large crops of blue grass and Timothy, suitable for hay. Besides this there are from 50 to 100 acres that has been or is now under the plow. If the purchaser choose he can have a large stock of cattle, implements, and all the material necessary to make the land profitable. For particulars, apply to **J. J. Kuhn,** corner Monroe ave. and Farmer st., Detroit.

A. D. J. FIRET.
P. S.—This farm also possesses a fine fishery, and can be approached by vessels of large size at several places. Mackinaw affords one of the best markets in Michigan for all farm produce. The climate is mild. The farm sells at a bargain, on reasonable terms of payment.

This farm and stock, will be sold at the very low price of \$4,000 if applied for before the first of June. This is a

GREAT BARGAIN.

The fishing stations alone are worth half the price asked. For further information apply to

R. F. JOHNSTONE,
Editor of the Mich. Farmer.

apr 3t

DRAIN TILE!

WE have constantly on hand all of Daines' Drain Tile.
103 Woodward Avenue,
D. O. & W. S. PENFIELD.
feb 6m

**FURNITURE WAREHOUSE,
ON JEFFERSON AVENUE,**

BELOW MICHIGAN EXCHANGE, DETROIT.

The Subscribers keep constantly on hand a large stock of

**ELEGANT FURNITURE,
Both Modern and Antique Styles, in Rosewood,
Mahogany and Domestic Wood.**

Those wishing rich and fashionable Furniture, will always find a great variety to select from—equal in every respect to anything in the Eastern market. Being in constant receipt of Pattern Pieces from the

FASHIONABLE MAKERS IN NEW YORK

they are enabled to guarantee the most PERFECT SATISFACTION to their customers.

They also keep constantly on hand a large and complete assortment of Plain Furniture of Mahogany, Cherry and Walnut. In short, every article in the line of Household Furniture will be found in their Stock, including Chairs of every style and price, from four shillings to sixty dollars each. The subscribers now have on hand, and make to order, best

HAIR MATTRESSES.

Their customers can rely upon getting a genuine article.

CORN-HUSK MATTRESSES AND STRAW PALMASES

constantly on hand. For the trade we keep constantly a large stock of Mahogany and Rosewood Veneer.

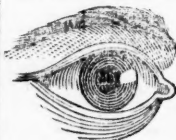
June '56. tf.

STEVENS & ZUG.

DR. H. BIGELOW, OCULIST,

(Office Room No. 9 Sheldon Block opposite the Peninsular Bank, Jefferson ave., Detroit, Mich.)

Respectfully announces to the public generally that he is now engaged in treating the various diseases of the Eye, with much success. Many Certificates and recommendations might here be given, but such things are so common at this day, that it is deemed sufficient merely to say to those afflicted, come and SEE H's treatment, is the same as that practised by the late Dr. George Bigelow. May, '57. lyr.

**GREAT SALE**

**DEVON CATTLE,
AND
SOUTHDOWN SHEEP.**

On Wednesday, 9th Sept., 1857.

I WILL sell at public auction, *without reserve*, my herd of Devon Cattle about 45 in number, and my flock of Southdown Sheep, about one hundred, at my farm on Grand Island, two miles from the railroad and omnibus stations in North Buffalo.

I have bred Devons for many years. The original stock was derived from the best animals, and for the last seven years my breeding bulls have been of imported blood, direct from Devonshire, England, with several of my present cows, are recorded in the English Devon Herd Book. All my herd will be recorded in the American Devon Herd Book, soon to be published, and are equal probably, in quality, to any others in this country. The herd consists of about 30 cows and heifers, and 15 or 16 bulls and bull calves.

My Southdowns are descended originally from the flocks of Mr. Elliman, the Duke of Richmond, and other celebrated English breeders, crossed for the last seven or eight years with rams bred by the great Southdown breeder, Mr. Webb of Babraham, England. There will be 75 or 80 ewes, the remainder rams.

As I intend making a clean sale, this will probably be a better opportunity for purchasers to select animals to their liking, than any other which will occur for some time.

Descriptive catalogues will be ready by the first of August, which will be sent by mail to all those applying to me by letter.

Terms of Sale.—For all sums less than \$100, cash; on sums of \$100 and over, good notes at three months, on interest, payable at bank, will be received.

The stock will be delivered on steamboat at railroad, at Buffalo, as may be desired, the day after the sale.

Those wishing to view the stock previous to the sale, will be conveyed to the farm by calling at my residence; and those attending on the sale day, will cross the Niagara river between the farm and main shore, by steam ferry, from the omnibus station at Lower Black Rock, or North Buffalo, to which either the omnibuses or railcars will bring them from their stations in Buffalo. Sale to commence at 11 o'clock, a. m. of the first day.
Black Rock, N. Y., July, 1857. aug2t **LEWIS F. ALLEN.**